Yahoo Group Archive: loopantennas (2013 — 2017)

Yahoo Group summary: This is the Loop Antenna Group to Ask Your Questions, Get Answers and Information about Loop Antennas for improved your Radio Listening and Enjoyment. \n \n This is your "HOW TO" Loop Antenna Forum to : Get Information, Plan, Design and Build Loop Antennas for both Radio Reception and Transmission. Air loops, magnetic loops, ferrite loops, shielded, unshielded, SLF to any frequency you can make a loop antenna for.\n \n Loop antennas are used to reduce interference or can be used as compact antennas or for radio direction finding (RDF).\n \n Post Your Question Here! To Get Needed Information and Opinions about a Commercial "Ready-Made" Loop Antenna or help with a home-made loop.\n \n Discussion of this Group is focused on the subject of Loop Antennas. All types of Loop Antennas including Ferrite Rod Loop Antennas; Air-Core Loop Antennas, Shielded Coax Cable Loop Antennas; all types of loop antennas.\n \n Loop Antennas for All Bands : SLF, VLF, LF, MF, HF, VHF, UHF, SHF etc. Longwave, Me

These Yahoo Groups messages were archived in WARC format by ArchiveTeam in 2017. This PDF was generated by Digital Library of Amateur Radio & Communications from the WARC files in 2026.

Date span: 2013-01-01 through 2017-05-22

Source WARC: loopantennas.cgAJkQd.warc.gz

Source item: https://archive.org/details/yahoo-groups-2017-05-23T02-01-34Z-c8358f

Messages included in this PDF: 2298

Message records with no body available in the source archive: 2

Yahoo replaced the domain portions of email addresses with @... in the archived messages. Characters lost in Yahoo's archived text appear as ?.

Messages are presented in ascending Yahoo message-ID order. Gaps indicate records absent from the source WARC or messages omitted from this PDF as spam.

9526. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-01 16:54:05 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 9526

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
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> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

9527. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-01 16:54:05 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 9527

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

9528. For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-04 14:27:48 UTC
From: everettsharp@aol.com
Topic: 9528 Message: 9528
Attachments: 3 described; binary payloads are missing from this source WARC

If anyone is interest in a MW Band 8" FSL, as described below, which I am asking $300 + shipping for, Then please contacted off list at _everettsharp@..._ (mailto:everettsharp@...)

The 8" FSL is 5" wide and 8" in diameter, only weights 7 pounds, 17" tall, including the carry handle and is mounted on a Lazy Susan. It has 32 Russian 125 X 16 X 4 mm ferrite bars, which are no longer available, that are epoxied to the plastic pipe and they are covered with fiberglass cloth, which was also covered with 2 coats of epoxy. The outside diameter of the FSL with the ferrite on it is 7". The ferrite is covered with 1/2 thick PE foam, thus with a ending diameter of 8".

The coil is 18 turns of 660/46 Litz wire, there is also a 1 turn winding next to the main winding that is used for a coupling coil, which is connected to a matching transformer, this is for a 50 ohm output that can connected to a desk top radio, which has a BNC connector on the back side. It also works very well using induction coupling for portable radios and brings them to life. The tuning capacitor, is a N 50 (10 to 365 pf), with has a 8:1 tuning ratio. The tuning range/coverage is 2060-530 KHz.

The FSL, is a one of a kind and is constructed very well. It has very sharp tuning and very good rotational nulls. Also based on my evaluation, it's performed is better than a 3' box loop. However, it shows lower S meter readings than the box loop, but a much better S/N than the air loop. It's appearance is in no way perfect, as it is home made, but it is probably one of the best construed and looking FSL's that has been built to date. I have several articles that are posted on the ULR-DX site covering many of my FSL antennas projects and experiments. and several have been posted on this site.

Below are some pictures of it:

So if anyone is interested, please let me know. The estimated, State Side, shipping cost is $25. So the total cost would be $325 delivered. I can take either a money order, or PayPal payment.

Everett N8CNP

9529. Radio Milne Bay on a KAZ 3/12m

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-04 19:54:48 UTC
From: KGB
Topic: 9529 Message: 9529

Hi everybody,

A little OT but here we go: I think I have Radio Milne Bay on 3365kHz in my headphones tonight. I have watched the PNG frequencies every evening since August. Often there is a carrier but seldom any modulation. Tonight it is rather good reception. The music is OK but the speec is very muddy. Just wanted ask the group
1 if anyone has heard R Minle Bay and can confirm the muddy modulation
2 if anyone knows of a good audio filter/equalizer to further process the received audio.

My setup is Perseus + Studio 1. Antenna is a 3/12m KAZ with Wellbrook FLG100LN (great amp).

I also have a 5/20m KAZ for NA MW DX. First I made it 6/24m but that was to much together with the FLG100LN, Perseus had frequent ADC clip. The last is sentence to get a more loopantenna touch to the message :-).

73,
Kjell-Göra SM4GRP

9530. Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 00:24:07 UTC
From: Dean Wayman
Topic: 9528 Message: 9530

--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
>
>
> If anyone is interest in a MW Band 8" FSL, as described below, which I am
> asking $300 + shipping for, Then please contacted off list at
> _everettsharp@..._ (mailto:everettsharp@...)
>
>
>
I don't see the pics Everett.

BTW if anyone has a source for some ferrite bars i would be interested,i'm not too keen on getting them from the Ukrain etc.

Thanks Dean_0

9531. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 01:02:00 UTC
From: W2XJ
Topic: 9528 Message: 9531

http://www.alltronics.com/cgi-bin/category.cgi?&category=FR&start=9

Sent from my iPad

On Jan 4, 2013, at 7:24 PM, "Dean Wayman" <dean_0_way@yahoo.com> wrote:

>
>
> --- In loopantennas@yahoogroups.com, everettsharp@... wrote:
> >
> >
> >
> > If anyone is interest in a MW Band 8" FSL, as described below, which I am
> > asking $300 + shipping for, Then please contacted off list at
> > _everettsharp@..._ (mailto:everettsharp@...)
> >
> >
> >
> I don't see the pics Everett.
>
> BTW if anyone has a source for some ferrite bars i would be interested,i'm not too keen on getting them from the Ukrain etc.
>
> Thanks Dean_0
>
>

9532. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 01:19:17 UTC
From: Rick Karlquist
Topic: 9528 Message: 9532

Can someone on the list educate us about the value proposition
for building something like this? For example, compared to the
single ferrite rod in my Superradio, what does this do better?
Perhaps more signal? Or does it have sharper nulls? Wider
or narrower bandwidth? Another thing I don't understand is
that it looks like the resulting ensemble is rather short and
fat. Why wouldn't you build it longer and skinnier?

How does it compare to, for example, a 10 foot diameter wire loop?

Is this just an example of "throwing ferrite at the problem?"

Just trying to learn something here.

Rick N6RK

Dean Wayman wrote:
>
>
> --- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>>
>>
>>
>> If anyone is interest in a MW Band 8" FSL, as described below, which I
>> am
>> asking $300 + shipping for, Then please contacted off list at
>> _everettsharp@..._ (mailto:everettsharp@...)
>>
>>
>>
> I don't see the pics Everett.
>
> BTW if anyone has a source for some ferrite bars i would be interested,i'm
> not too keen on getting them from the Ukrain etc.
>
> Thanks Dean_0
>
>

9533. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 01:34:59 UTC
From: everettsharp@aol.com
Topic: 9528 Message: 9533

Hi Dean,

Some of the experimenters have tried the EMI ferrite bars that were offered on eBay, but they found that they were trash. Your other option is to use some of the mix 61 3/8 X 7.5" ferrite rods, but @ $15 each and requiring about 54 of them, it would cost you over $800 in ferrite to duplicate what I am offer for sale.

There are still some of the Russian 62 X 12 X 4 mm bars for sale on eBay, at 20 for $13 delivered, it would take 86 bars at a cost of $56. I have over a 1000 of them and they work very well and I have used them in many experiments making FSL's as wide as 12" with the bars butter together. Also there are now some Chines bars that are being offered on eBay that are 55 X 13 X 5 mm, 5 of then at a cost of $5 delivered, it would take 80 of them at a cost of $80. I have never tried them and have no idea if they would even work.

Then there is one last option and that is to build a Stacked Toroid Loop Stick, using FT140-61 toroids. You can buy 30 of them from Kit Parts for $70 delivered. This will make you a 15" X 1.4" ferrite rod that works very well, but not as good as a 8" FSL. There should be a article posted on this site that I wrote that gives a lot of very good information that would help you if you decide to go that direction. I was able to make dual band configurations with the STLS that would either cover the MW and LW bands, or MW and a portion of the tropical bands and MW.

Other cost considerations are the N-50, with 8:1 ratio, at about $25 and the 660/46 Litz wire at about $.030 per foot. With the Litz wire you will have to order more then what you will use and you will end up dump about 30 to 40% of it into the trash can. It takes a lot of trial and error and a lot of man hours to get one to work. I sure would not make one for $300 and the only reason I am selling it is that I am trying to down size my antenna collection. The money will only be use to fund other antenna experiments.

Everett

In a message dated 1/4/2013 6:24:11 P.M. Central Standard Time, dean_0_way@... writes:

--- In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
, everettsharp@... wrote:
>
>
>
> If anyone is interest in a MW Band 8" FSL, as described below, which I
am
> asking $300 + shipping for, Then please contacted off list at

> _everettsharp@..._ (mailto:everettsharp@...)
>
>
>
I don't see the pics Everett.

BTW if anyone has a source for some ferrite bars i would be interested,i'm not too keen on getting them from the Ukrain etc.

Thanks Dean_0

9534. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 01:45:55 UTC
From: everettsharp@aol.com
Topic: 9528 Message: 9534

Rick,

AlI I can tell you is that it's performance is about equal to a 4' box loop. You will see lower S meter readings with the FSL, but the FSL has much lower noise and the week signals are easer to hear. There have been many articles written about the FSL antenna and many of them are posted on the URL DX yahoo site. I have done a lot of experimenting with different FSL configurations and some of the articles that I have written are posted on this site.

Everett

In a message dated 1/4/2013 7:19:20 P.M. Central Standard Time, richard@... writes:

Can someone on the list educate us about the value proposition for building something like this? For example, compared to the single ferrite rod in my Superradio, what does this do better? Perhaps more signal? Or does it have sharper nulls? Wider or narrower bandwidth? Another thing I don't understand is that it looks like the resulting ensemble is rather short and fat. Why wouldn't you build it longer and skinnier?

How does it compare to, for example, a 10 foot diameter wire loop?

Is this just an example of "throwing ferrite at the problem?"

Just trying to learn something here.

Rick N6RK

Dean Wayman wrote:
>
>
> --- In _loopantennas@yahoogroups.com_
(mailto:loopantennas@yahoogroups.com) , everettsharp@... wrote:
>>
>>
>>
>> If anyone is interest in a MW Band 8" FSL, as described below, which I
>> am
>> asking $300 + shipping for, Then please contacted off list at
>> _everettsharp@..._ (mailto:everettsharp@...)
>>
>>
>>
> I don't see the pics Everett.

>
> BTW if anyone has a source for some ferrite bars i would be
interested,i'm
> not too keen on getting them from the Ukrain etc.
>
> Thanks Dean_0
>
>

9535. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 01:47:33 UTC
From: everettsharp@aol.com
Topic: 9528 Message: 9535

Alltronics is the most expensive place to buy ferrite.

In a message dated 1/4/2013 7:02:08 P.M. Central Standard Time,
w2xj@... writes:

http://www.alltronics.com/cgi-bin/category.cgi?&category=FR&start=9
(http://www.alltronics.com/cgi-bin/category.cgi?&category=FR&start=9)

Sent from my iPad

On Jan 4, 2013, at 7:24 PM, "Dean Wayman" <_dean_0_way@..._
(mailto:dean_0_way@...) > wrote:

--- In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
, everettsharp@... wrote:
>
>
>
> If anyone is interest in a MW Band 8" FSL, as described below, which I
am
> asking $300 + shipping for, Then please contacted off list at
> _everettsharp@..._ (mailto:everettsharp@...)
>
>
>
I don't see the pics Everett.

BTW if anyone has a source for some ferrite bars i would be interested,i'm
not too keen on getting them from the Ukrain etc.

Thanks Dean_0

9536. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 01:57:13 UTC
From: Everettsharp
Topic: 9528 Message: 9536

Dean send me your off list email address and I will send the pictures

I think that tis site maybe cutting off part of my address so let's try this. Everettsharp (at) aol.

Everett

Sent from my iPhone

On Jan 4, 2013, at 6:24 PM, "Dean Wayman" <dean_0_way@...> wrote:

>
>
> --- In loopantennas@yahoogroups.com, everettsharp@... wrote:
> >
> >
> >
> > If anyone is interest in a MW Band 8" FSL, as described below, which I am
> > asking $300 + shipping for, Then please contacted off list at
> > _everettsharp@..._ (mailto:everettsharp@...)
> >
> >
> >
> I don't see the pics Everett.
>
> BTW if anyone has a source for some ferrite bars i would be interested,i'm not too keen on getting them from the Ukrain etc.
>
> Thanks Dean_0
>
>

9537. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 03:14:34 UTC
From: Tim Hills
Topic: 9528 Message: 9537

I get mine straight from Amidon, and they have the 0.5"x7.5" rods in 61
and 33 material back in stock for $20/each.

On 1/4/2013 19:47, everettsharp@... wrote:
>
> Alltronics is the most expensive place to buy ferrite.
> In a message dated 1/4/2013 7:02:08 P.M. Central Standard Time,
> w2xj@... writes:
>
> http://www.alltronics.com/cgi-bin/category.cgi?&category=FR&start=9
>
> Sent from my iPad
>
> On Jan 4, 2013, at 7:24 PM, "Dean Wayman" <dean_0_way@...
> <mailto:dean_0_way@...>> wrote:
>
>>
>>
>> --- In loopantennas@yahoogroups.com
>> <mailto:loopantennas%40yahoogroups.com>, everettsharp@... wrote:
>> >
>> >
>> >
>> > If anyone is interest in a MW Band 8" FSL, as described below,
>> which I am
>> > asking $300 + shipping for, Then please contacted off list at
>> > _everettsharp@..._ (mailto:everettsharp@...)
>> >
>> >
>> >
>> I don't see the pics Everett.
>>
>> BTW if anyone has a source for some ferrite bars i would be
>> interested,i'm not too keen on getting them from the Ukrain etc.
>>
>> Thanks Dean_0
>>
>
> <http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJxZW9lNWViBF9TAzk3MzU5NzE0BG
dycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAM5NTM1BHNlYwNmdHIEc2xrA3JwbHkEc3RpbWUD
MTM1NzM1MDQ1NA--?act=reply&messageNum=9535>
>
>
>
>

>

9538. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 03:35:23 UTC
From: Tim Hills
Topic: 9528 Message: 9538

Everett:

I would say that's a good price for a working FSL of that size. Just my $0.02 on that.

One "trick" I've leaned for saving on Litz waste is to use stranded/insulated hookup wire with close to the same diameter and find the number of turns for the upper end of the desired band then wind with the Litz, the distributed capacitance for the Litz will be a bit higher so trimming a turn or two on a close wound ferrite after assembly saves me a lot of $ compared to trial and error. With air core loops the difference in distributed capacitance is negligible if there's 1/4" or more spacing between turns.

Tim Hills
Sioux Falls, SD

On 1/4/2013 19:34, everettsharp@... wrote:
>
> Hi Dean,
> Some of the experimenters have tried the EMI ferrite bars that were
> offered on eBay, but they found that they were trash. Your other
> option is to use some of the mix 61 3/8 X 7.5" ferrite rods, but @ $15
> each and requiring about 54 of them, it would cost you over $800 in
> ferrite to duplicate what I am offer for sale.
> There are still some of the Russian 62 X 12 X 4 mm bars for sale on
> eBay, at 20 for $13 delivered, it would take 86 bars at a cost of $56.
> I have over a 1000 of them and they work very well and I have used
> them in many experiments making FSL's as wide as 12" with the bars
> butter together. Also there are now some Chines bars that are being
> offered on eBay that are 55 X 13 X 5 mm, 5 of then at a cost of $5
> delivered, it would take 80 of them at a cost of $80. I have never
> tried them and have no idea if they would even work.
> Then there is one last option and that is to build a Stacked Toroid
> Loop Stick, using FT140-61 toroids. You can buy 30 of them from Kit
> Parts for $70 delivered. This will make you a 15" X 1.4" ferrite rod
> that works very well, but not as good as a 8" FSL. There should be a
> article posted on this site that I wrote that gives a lot of very good
> information that would help you if you decide to go that direction. I
> was able to make dual band configurations with the STLS that would
> either cover the MW and LW bands, or MW and a portion of the tropical
> bands and MW.
> Other cost considerations are the N-50, with 8:1 ratio, at about $25
> and the 660/46 Litz wire at about $.030 per foot. With the Litz wire
> you will have to order more then what you will use and you will end up
> dump about 30 to 40% of it into the trash can. It takes a lot of trial

> and error and a lot of man hours to get one to work. I sure would not
> make one for $300 and the only reason I am selling it is that I am
> trying to down size my antenna collection. The money will only be use
> to fund other antenna experiments.
> Everett
>

9539. Re: [loopantennas] Re: For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 04:24:49 UTC
From: Everettsharp
Topic: 9528 Message: 9539

Tim,

Thanks for the tip. If you have looked at any of my articles you will notice a lot of spliced Litz wire in the pictures. To date
I have made up and wound well over a 100 different coil/FSL configurations.

The stacked toroidal loop stick project that I experimented with worked out extremely well and I was quite pleased with how well it worked. I just ordered 60 more of the FT140-61 toroids from kit parts. I plan on making a 23" long loop stick with 4 to 6 coils in parallel, as I have seen some advantages in multi coils in parallel.

Everett

Sent from my iPhone

On Jan 4, 2013, at 9:35 PM, Tim Hills <thills@...> wrote:

> Everett:
>
> I would say that's a good price for a working FSL of that size. Just my $0.02 on that.
>
> One "trick" I've leaned for saving on Litz waste is to use stranded/insulated hookup wire with close to the same diameter and find the number of turns for the upper end of the desired band then wind with the Litz, the distributed capacitance for the Litz will be a bit higher so trimming a turn or two on a close wound ferrite after assembly saves me a lot of $ compared to trial and error. With air core loops the difference in distributed capacitance is negligible if there's 1/4" or more spacing between turns.
>
> Tim Hills
> Sioux Falls, SD
>
> On 1/4/2013 19:34, everettsharp@... wrote:
>>
>>
>> Hi Dean,
>>
>> Some of the experimenters have tried the EMI ferrite bars that were offered on eBay, but they found that they were trash. Your other option is to use some of the mix 61 3/8 X 7.5" ferrite rods, but @ $15 each and requiring about 54 of them, it would cost you over $800 in ferrite to duplicate what I am offer for sale.
>>
>> There are still some of the Russian 62 X 12 X 4 mm bars for sale on eBay, at 20 for $13 delivered, it would take 86 bars at a cost of $56. I have over a 1000 of them and they work very well and I have used them in many experiments making FSL's as wide as 12" with the bars butter together. Also there are now some Chines bars that are being offered on eBay that are 55 X 13 X 5 mm, 5 of then at a cost of $5 delivered, it would take 80 of them at a

cost of $80. I have never tried them and have no idea if they would even work.
>>
>> Then there is one last option and that is to build a Stacked Toroid Loop Stick, using FT140-61 toroids. You can buy 30 of them from Kit Parts for $70 delivered. This will make you a 15" X 1.4" ferrite rod that works very well, but not as good as a 8" FSL. There should be a article posted on this site that I wrote that gives a lot of very good information that would help you if you decide to go that direction. I was able to make dual band configurations with the STLS that would either cover the MW and LW bands, or MW and a portion of the tropical bands and MW.
>>
>> Other cost considerations are the N-50, with 8:1 ratio, at about $25 and the 660/46 Litz wire at about $.030 per foot. With the Litz wire you will have to order more then what you will use and you will end up dump about 30 to 40% of it into the trash can. It takes a lot of trial and error and a lot of man hours to get one to work. I sure would not make one for $300 and the only reason I am selling it is that I am trying to down size my antenna collection. The money will only be use to fund other antenna experiments.
>>
>> Everett
>
>

9540. Re: [loopantennas] For Sale 8" MW Band FSL antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 04:48:56 UTC
From: Everettsharp
Topic: 9528 Message: 9540

Guys the FSL is sold.

Sent from my iPhone

On Jan 4, 2013, at 8:27 AM, everettsharp@... wrote:

>
> If anyone is interest in a MW Band 8" FSL, as described below, which I am asking $300 + shipping for, Then please contacted off list at everettsharp@...
>
> The 8" FSL is 5" wide and 8" in diameter, only weights 7 pounds, 17" tall, including the carry handle and is mounted on a Lazy Susan. It has 32 Russian 125 X 16 X 4 mm ferrite bars, which are no longer available, that are epoxied to the plastic pipe and they are covered with fiberglass cloth, which was also covered with 2 coats of epoxy. The outside diameter of the FSL with the ferrite on it is 7". The ferrite is covered with 1/2 thick PE foam, thus with a ending diameter of 8".
>
> The coil is 18 turns of 660/46 Litz wire, there is also a 1 turn winding next to the main winding that is used for a coupling coil, which is connected to a matching transformer, this is for a 50 ohm output that can connected to a desk top radio, which has a BNC connector on the back side. It also works very well using induction coupling for portable radios and brings them to life. The tuning capacitor, is a N 50 (10 to 365 pf), with has a 8:1 tuning ratio. The tuning range/coverage is 2060-530 KHz.
>
> The FSL, is a one of a kind and is constructed very well. It has very sharp tuning and very good rotational nulls. Also based on my evaluation, it's performed is better than a 3' box loop. However, it shows lower S meter readings than the box loop, but a much better S/N than the air loop. It's appearance is in no way perfect, as it is home made, but it is probably one of the best construed and looking FSL's that has been built to date. I have several articles that are posted on the ULR-DX site covering many of my FSL antennas projects and experiments. and several have been posted on this site.
>
> Below are some pictures of it:
>
> <DSCF1146.JPG><DSCF1144.JPG>
>
> <DSCF1145.JPG>
>
> So if anyone is interested, please let me know. The estimated, State Side, shipping cost is $25. So the total cost would be $325 delivered. I can take either a money order, or PayPal payment.
>
> Everett N8CNP
>
>

9541. fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 05:53:59 UTC
From: Dean Wayman
Topic: 9541 Message: 9541

Just wondered if you had seen this?

No litz used ?

Dean_0

http://www.gmweb2.net/The%20FS%20Loop.htm

9542. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 16:32:36 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9542

Hi Dean,

Yes I have seen that article, that is what got all of the experimenters fired up and the low cost Russian ferrite. However when building a larger FSL you will run into some distributed capacitance issues with standard wire, which is a Q killer, thus reducing the tuning sharpness and band coverage. That is why almost of all of the FSL's are built using Litz wire.

I question some of the theory sited in that article, but it was what got us all started with experimenting with FSL's.

Everett

In a message dated 1/4/2013 11:54:04 P.M. Central Standard Time, dean_0_way@yahoo.com writes:

Just wondered if you had seen this?

No litz used ?

Dean_0

http://www.gmweb2.net/The%20FS%20Loop.htm
(http://www.gmweb2.net/The%20FS%20Loop.htm)

9543. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 17:21:44 UTC
From: John Popelish
Topic: 9541 Message: 9543

On 01/05/2013 11:32 AM, everettsharp@... wrote:
> Hi Dean,
>
> Yes I have seen that article, that is what got all of the experimenters
> fired up and the low cost Russian ferrite. However when building a larger FSL
> you will run into some distributed capacitance issues with standard wire,
> which is a Q killer, thus reducing the tuning sharpness and band coverage.
> That is why almost of all of the FSL's are built using Litz wire.
>
> I question some of the theory sited in that article, but it was what got us
> all started with experimenting with FSL's.

Okay, I'll bite. What does Litz wire have to do with
distributed capacitance?

--
Regards,

John Popelish

9544. Value proposistion for FSLs (Rick question)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 19:49:33 UTC
From: lowalacrity
Topic: 9528 Message: 9544

Rick,
More to your actual question, In my experience, I haven't found that much performance improvement when using add-on loops to already high performing radios such as yours. They already have relatively large ferrite loops built in. With a cheap transistor radio, they make a huge difference. Same with the new generation of Ultra Lights, they have small ferrite rods that benefit from augmentation. The DSP technology they employ makes them unbeatable.
To the fat vs. skinny question. The resurgence and popularity of FSL's attest to the superiority of loop diameter. Like air core loops, I think it has to do with aperture. The thing with large air cores is that they become cumbersome. Ferrite core loops, especially FSL's, condense that performance down. The litz wire helps a great deal to, with the added "Q". With sensitivity comes added noise. Contra (counter wound) windings come into play here. They do make a difference. My work with Everett's Stacked Toroid Ferrite Loop has shown me this and made it my reference loop of choice. (plug)..
I hope this helps.
73,
John KG6ZBN

--- In loopantennas@yahoogroups.com, "Rick Karlquist" wrote:
>
> Can someone on the list educate us about the value proposition
> for building something like this? For example, compared to the
> single ferrite rod in my Superradio, what does this do better?
> Perhaps more signal? Or does it have sharper nulls? Wider
> or narrower bandwidth? Another thing I don't understand is
> that it looks like the resulting ensemble is rather short and
> fat. Why wouldn't you build it longer and skinnier?
>
> How does it compare to, for example, a 10 foot diameter wire loop?
>
> Is this just an example of "throwing ferrite at the problem?"
>
> Just trying to learn something here.
>
> Rick N6RK
>
>
>
> Dean Wayman wrote:
> >
> >
> > --- In loopantennas@yahoogroups.com, everettsharp@ wrote:
> >>
> >>
> >>

> >> If anyone is interest in a MW Band 8" FSL, as described below, which I
> >> am
> >> asking $300 + shipping for, Then please contacted off list at
> >> _everettsharp@_ (mailto:everettsharp@)
> >>
> >>
> >>
> > I don't see the pics Everett.
> >
> > BTW if anyone has a source for some ferrite bars i would be interested,i'm
> > not too keen on getting them from the Ukrain etc.
> >
> > Thanks Dean_0
> >
> >
>

9545. Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 22:12:22 UTC
From: Dean Wayman
Topic: 9541 Message: 9545

--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
> Hi Dean,
>
> Yes I have seen that article, that is what got all of the experimenters
> fired up and the low cost Russian ferrite. However when building a larger FSL
> you will run into some distributed capacitance issues with standard wire,
> which is a Q killer, thus reducing the tuning sharpness and band coverage.
> That is why almost of all of the FSL's are built using Litz wire.
>
> I question some of the theory sited in that article, but it was what got us
> all started with experimenting with FSL's.
>
> Everett
>
>
OH! how i have struggled to understand (visualize) what he is saying in the article! ,after reading it ,well trying to read it a hundred times i just decided to build one some day and compare it to the 4 foot loop i built ,it was a decent performer , but as you might guess not useful in my shack.

Anyway you guy's should at some point right an article on your findings,one thing i'd really like to try is take the RF 2200 out into the wasteland with an FSL :)

Thanks
Dean_0

9546. Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 22:28:22 UTC
From: Alberto I2PHD
Topic: 9546 Message: 9546

Hi all,

this is the group where all the loop gurus lurk, so I think this is the best place where to ask suggestions
about this simple schematic of a preamplifier I have just built for my single turn loop, made of 3/8" copper
tube, about 1.3 meter (4.8 feet) in diameter, which in my intentions should cover from 60 kHz to the
21 MHz ham band.

I simulated it with PSpice, and it looks like it works. The problem being that it is not quite bullet proof as
far as intermodulation is concerned... especially in the evening, with the field strength that AM broadcast
stations have here in Europe, some intermodulation raises its ugly head...

I know that persons very expert in this field read this group (e.g. Jack K8ZOA and Chris Trask N7ZWY),
so I am asking advice. I do not pretend that you reveal how you built your commercial preamps,
that work very well, just if you have suggestions about changes to do to this schematic, even if they
are of the type : "Throw it away, it is good for nothing" :-)

This preamp tries to have a very low input impedance, to match that of the loop, and to avoid the need
to electrically shield the loop itself, as it, electrically speaking, is almost at ground potential.

Thanks for any help.

This is the schematic :

https://dl.dropbox.com/u/15089947/preampBFR95_2stages_en.gif

--
/*73 Alberto I2PHD*/

9547. Re: [loopantennas] Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-05 22:58:43 UTC
From: Jack Smith
Topic: 9546 Message: 9547

A few comments - I have not tried to analyze your circuit in detail so I will speak in general terms.

First, a balanced design with push-pull throughout will greatly improve 2nd order distortion and will also improve 3rd order distortion, although to a lesser amount.

Second, 2N3904 transistors would not be my choice for a high performance design. I would go with a part with much higher ft, perhaps the BFR95/PLP used in the first stage.

Third, you will find that there is an optimum idle current for 2nd and 3rd order intermodulation for each transistor type, and that 2nd and 3rd order intermodulation performance is not optimized at the same current. This is where a real RF transistor is beneficial as the data sheet will have some plots of 2nd and 3rd order intermodulation versus collector current.

Fourth, in a loop preamplifier, noise figure is very important and resistance feedback amplifiers are not the topology of choice for low noise figure amplifiers.

Jack K8ZOA

On 1/5/2013 5:28 PM, Alberto I2PHD wrote:
>
> Hi all,
>
> this is the group where all the loop gurus lurk, so I think this is
> the best place where to ask suggestions
> about this simple schematic of a preamplifier I have just built for my
> single turn loop, made of 3/8" copper
> tube, about 1.3 meter (4.8 feet) in diameter, which in my intentions
> should cover from 60 kHz to the
> 21 MHz ham band.
>
> I simulated it with PSpice, and it looks like it works. The problem
> being that it is not quite bullet proof as
> far as intermodulation is concerned... especially in the evening,
> with the field strength that AM broadcast
> stations have here in Europe, some intermodulation raises its ugly head...
>
> I know that persons very expert in this field read this group (e.g.
> Jack K8ZOA and Chris Trask N7ZWY),
> so I am asking advice. I do not pretend that you reveal how you built
> your commercial preamps,

> that work very well, just if you have suggestions about changes to do
> to this schematic, even if they
> are of the type : "Throw it away, it is good for nothing" :-)
>
> This preamp tries to have a very low input impedance, to match that of
> the loop, and to avoid the need
> to electrically shield the loop itself, as it, electrically speaking,
> is almost at ground potential.
>
> Thanks for any help.
>
> This is the schematic :
>
> https://dl.dropbox.com/u/15089947/preampBFR95_2stages_en.gif
>
>
> --
> /*73 Alberto I2PHD*/
>

9548. Re: [loopantennas] Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 01:19:22 UTC
From: toddroberts2001@aol.com
Topic: 9546 Message: 9548

You might look into the M0AYF loop preamp circuit. It is a simple
broadband single-turn loop with a balanced preamp circuit
that is easy to build and gives very good results.

73 - Todd WD4NGG

Hi all,

this is the group where all the loop gurus lurk, so I think this is the
best place where to ask suggestions
about this simple schematic of a preamplifier I have just built for my
single turn loop, made of 3/8" copper
tube, about 1.3 meter (4.8 feet) in diameter, which in my intentions should
cover from 60 kHz to the
21 MHz ham band.

9549. Re: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 01:59:23 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9549

Dean,

Don't spend too much time reading that article, the information, good, or bad, will not help you build a FSL. I am going to give you a link to a article that I have posted on this site, which has a ton of information that should be helpful to you if you want to build a FSL.

But here is my advise, if you want to build a FSL now, or later, then buy now the 62 x 12 X 4 mm Russian ferrite bars now listed on eBay, as they will not last much longer. There were 3 suppliers of the bars, which have been cleaned out and there is now only one left, he had the higher prices that is why he still has bars left. Even at his current prices they are a bargain.

So you need to ask yourself, do I want a single band, or a dual band FSL. If it is a single band then you only need to be 2 bars wide (5"), if you want a dual band then you need to be 3 bars wide (7.5"). It has been proven that a 8" FSL is a good performer, so shoot for that. So if you are going for a single band FSL you will need 86 bars, if you want to go for a dual band FSL then you will need 129 bars.

_http://f1.grp.yahoofs.com/v1/kMzoUMuW30lYV9RXwkaL4nvR5TASpQ6G49gT5NuJBYmBPo
PH9TE5T3bv8PkO8-mx4-9Tqf2REiudBt83MOVUDAjg6YdPQp9YDdgWb24/Experimentswitha7%
5B3%5D.pdf_
(http://f1.grp.yahoofs.com/v1/kMzoUMuW30lYV9RXwkaL4nvR5TASpQ6G49gT5NuJBYmBPoPH9TE5T3bv8PkO
8-mx4-9Tqf2REiudBt83MOVUDAjg6YdPQp9YDdgWb24/Experi
mentswitha7[3].pdf)

Also her is the one on the Stacked Toroid Loop Antenna, which is also avery good loop antenna.

_http://f1.grp.yahoofs.com/v1/kMzoUJsTN0lYV9RXB4nDB9XB23mnVcUmYIZGQx5Iz2Dk4A
3YLY0cDlFd9vzcTnRVu2z2GS9hBMg2_RzSEzAQBQTGS51Xrfxxb-Rfn4Q/ExperimentsWithaLo
opstickAntennausingToroids%5B1%5D.pdf_
(http://f1.grp.yahoofs.com/v1/kMzoUJsTN0lYV9RXB4nDB9XB23mnVcUmYIZGQx5Iz2Dk4A3YLY0cDlFd9vzc
TnRVu2z2GS9hBMg2_RzSEzA
QBQTGS51Xrfxxb-Rfn4Q/ExperimentsWithaLoopstickAntennausingToroids[1].pdf)

Everett

In a message dated 1/5/2013 4:12:26 P.M. Central Standard Time, dean_0_way@...m writes:

--- In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
, everettsharp@... wrote:
>
> Hi Dean,

>
> Yes I have seen that article, that is what got all of the experimenters
> fired up and the low cost Russian ferrite. However when building a
larger FSL
> you will run into some distributed capacitance issues with standard
wire,
> which is a Q killer, thus reducing the tuning sharpness and band
coverage.
> That is why almost of all of the FSL's are built using Litz wire.
>
> I question some of the theory sited in that article, but it was what got
us
> all started with experimenting with FSL's.
>
> Everett
>
>
OH! how i have struggled to understand (visualize) what he is saying in
the article! ,after reading it ,well trying to read it a hundred times i just
decided to build one some day and compare it to the 4 foot loop i built
,it was a decent performer , but as you might guess not useful in my shack.

Anyway you guy's should at some point right an article on your
findings,one thing i'd really like to try is take the RF 2200 out into the wasteland
with an FSL :)

Thanks
Dean_0

9550. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 02:15:55 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9550

Hi John,

It probably does not mean anything if you have enough space between the turns, but when you have the windings next to each other, then distributed capacitance does become a major factor. Litz wire does have less distributed capacitance when the windings are butted up next to each other, then does standard wire.

Everett

In a message dated 1/5/2013 11:21:50 A.M. Central Standard Time, jpopelish@... writes:

On 01/05/2013 11:32 AM, _everettsharp@..._
(mailto:everettsharp@...) wrote:
> Hi Dean,
>
> Yes I have seen that article, that is what got all of the experimenters
> fired up and the low cost Russian ferrite. However when building a
larger FSL
> you will run into some distributed capacitance issues with standard wire,
> which is a Q killer, thus reducing the tuning sharpness and band
coverage.
> That is why almost of all of the FSL's are built using Litz wire.
>
> I question some of the theory sited in that article, but it was what got
us
> all started with experimenting with FSL's.

Okay, I'll bite. What does Litz wire have to do with
distributed capacitance?

--
Regards,

John Popelish

9551. Re: [loopantennas] Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 02:34:03 UTC
From: Nick Rumple
Topic: 9546 Message: 9551

Hi,
I read your post, and it sounds very familiar. I just built a 1 meter loop using 3/8" copper tubing, and it works extremely well, but...I don't think that you will get that large of a range with it. I used a dual gang 365pf variable capacitor, and with both gangs switched in, it bottoms out around 3.2 mHz. And with only one gang switched in, it tops out just above the 20 meter ham band.....about 14.5 mHz. One thing that I found though, it tunes so sharp, that I had to put a 3:1 tuning reduction unit on the capacitor to be able to tune it.

Nick

----- Original Message -----
> Hi all,
>
> this is the group where all the loop gurus lurk, so I think this is the
> best place where to ask suggestions
> about this simple schematic of a preamplifier I have just built for my
> single turn loop, made of 3/8" copper
> tube, about 1.3 meter (4.8 feet) in diameter, which in my intentions should
> cover from 60 kHz to the
> 21 MHz ham band.
>
>
>

9552. Re: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 04:51:26 UTC
From: Adrian Flynn
Topic: 9541 Message: 9552

Everett,

Those links show a 404 error

Adrian

On Sat, Jan 5, 2013 at 8:59 PM, <everettsharp@...> wrote:

> **
>
>
> **
> Dean,
>
> Don't spend too much time reading that article, the information, good,
> or bad, will not help you build a FSL. I am going to give you a link to a
> article that I have posted on this site, which has a ton of information
> that should be helpful to you if you want to build a FSL.
>
> But here is my advise, if you want to build a FSL now, or later, then *buy
> now the 62 x 12 X 4 mm Russian* *ferrite bars* now listed on eBay, as
> they will not last much longer. There were 3 suppliers of the bars, which
> have been cleaned out and there is now only one left, he had the higher
> prices that is why he still has bars left. Even at his current prices they
> are a bargain.
>
> So you need to ask yourself, do I want a single band, or a dual band
> FSL. If it is a single band then you only need to be 2 bars wide (5"), if
> you want a dual band then you need to be 3 bars wide (7.5"). It has been
> proven that a 8" FSL is a good performer, so shoot for that. So if you are
> going for a single band FSL you will need 86 bars, if you want to go for a
> dual band FSL then you will need 129 bars.
>
>
> http://f1.grp.yahoofs.com/v1/kMzoUMuW30lYV9RXwkaL4nvR5TASpQ6G49gT5NuJBYmBPoPH9TE5T3bv8PkO8-mx4-9Tqf2REiudBt83MOVUDAjg6YdPQp9YDdgWb24/Experimentswitha7%5B3%5D.pdf
>
> Also her is the one on the Stacked Toroid Loop Antenna, which is also
> avery good loop antenna.
>
>
> http://f1.grp.yahoofs.com/v1/kMzoUJsTN0lYV9RXB4nDB9XB23mnVcUmYIZGQx5Iz2Dk4A3YLY0cDlFd9vzcTnRVu2z2GS9hBMg2_RzSEzAQBQTGS51Xrfxxb-Rfn4Q/ExperimentsWithaLoopstickAntennausingToroids%5B1%5D.pdf
>
> Everett

>
>
>
> In a message dated 1/5/2013 4:12:26 P.M. Central Standard Time,
> dean_0_way@... writes:
>
>
>
>
>
> --- In loopantennas@yahoogroups.com, everettsharp@... wrote:
> >
> > Hi Dean,
> >
> > Yes I have seen that article, that is what got all of the experimenters
> > fired up and the low cost Russian ferrite. However when building a
> larger FSL
> > you will run into some distributed capacitance issues with standard
> wire,
> > which is a Q killer, thus reducing the tuning sharpness and band
> coverage.
> > That is why almost of all of the FSL's are built using Litz wire.
> >
> > I question some of the theory sited in that article, but it was what got
> us
> > all started with experimenting with FSL's.
> >
> > Everett
> >
> >
> OH! how i have struggled to understand (visualize) what he is saying in
> the article! ,after reading it ,well trying to read it a hundred times i
> just decided to build one some day and compare it to the 4 foot loop i
> built ,it was a decent performer , but as you might guess not useful in my
> shack.
>
> Anyway you guy's should at some point right an article on your
> findings,one thing i'd really like to try is take the RF 2200 out into the
> wasteland with an FSL :)
>
> Thanks
> Dean_0
>
>
>

9553. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 05:24:54 UTC
From: John Popelish
Topic: 9541 Message: 9553

On 01/05/2013 09:15 PM, everettsharp@... wrote:
> Hi John,
>
> It probably does not mean anything if you have enough space between the
> turns, but when you have the windings next to each other, then distributed
> capacitance does become a major factor. Litz wire does have less distributed
> capacitance when the windings are butted up next to each other, then does
> standard wire.

I didn't know that. Is this a fact you have measured, or a
claim you have read, somewhere? (I'm sceptical.)

--
Regards,

John Popelish

9554. Re: FSLs using Litz vs. non-Litz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 07:08:51 UTC
From: Steve Ratzlaff
Topic: 9541 Message: 9554

Yes, use of Litz gives less distributed capacitance when wound with turns directly side by side with no spacing between turns, compared to non-Litz wound side by side with no spacing between turns. Those of us who have made LF and MW FSLs have observed this every time a comparison was made. Non-Litz turns need to be spaced to get the same tuning range for a given size tuning capacitor. (A small group of experimenters began experimenting building FSLs once Graham Maynard's article became available--Kevin Schanilec, Gary DeBock and myself, and later, Everett Sharp joined in. Results were posted on the yahoo ULR group. We quickly found that Litz gave significantly better results--higher output and sharper tuning--than non-Litz and never used non-Litz after that. And using the biggest Litz available (660/46) gave the best FSLs, even at LF, where /46 Litz isn't supposed to be optimum. Litz can be spaced to get the absolute lowest distributed capacitance for a given coil diameter, but we wound most of our Litz FSLs with no spacing. Everett Sharp probably has the most experience building FSLs with spaced-Litz.) (Everett Sharp was going away on vacation shortly and may be already gone--he may not be able to give any more replies for awhile.)
73,
Steve AA7U

On 1/5/2013 9:24 PM, John Popelish wrote:
> On 01/05/2013 09:15 PM, everettsharp@...
> <mailto:everettsharp%40aol.com> wrote:
> > Hi John,
> >
> > It probably does not mean anything if you have enough space between the
> > turns, but when you have the windings next to each other, then
> distributed
> > capacitance does become a major factor. Litz wire does have less
> distributed
> > capacitance when the windings are butted up next to each other, then does
> > standard wire.
>
> I didn't know that. Is this a fact you have measured, or a
> claim you have read, somewhere? (I'm sceptical.)
>
> --
> Regards,
>
> John Popelish

9555. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 11:17:25 UTC
From: Tim Hills
Topic: 9541 Message: 9555

Just my $0.02.

I have not built an FSL but I've built many (on the order of 100) air and ferrite core tuned loops over the years. I even built a 3' spiral loop with 22 Ga. Sterling Silver wire back when Silver was cheaper.

Distributed capacitance is pretty easy to measure with a signal generator and oscilloscope and a bit of Math. A loop antenna is basically a parallel LCR tuned circuit whose input is the magnetic component of the local RF field. If there's no tuning capacitor hooked to the coil it still has a resonant frequency that can be determined easily enough. Finding the self resonant frequency and then putting a known value capacitor across the coil and measuring that resonate frequency, with a little Math, the distributed capacitance of the coil can be derived.

When working with a new design I use solid or stranded insulated wire with as close to the same diameter as the Litz I plan to use on the final winding to save $ so I've made quite a few measurements of distributed capacitance. What I've found is that with air core loops with 1/4" or more spacing the difference is negligible and with close wound rods it can vary from about 25-35% less with the Litz compared to enamel coated solid wire to 10% or so MORE with the Litz compared to some vinyl coated stranded wire with the same outer diameter as the Litz. Distributed capacitance will lower the Q and narrow the tuning range.

It's my understanding and experience that the main advantage of using Litz wire is it's lower resistance to RF current. Most papers and articles I've seen about resonant loop antennas ignore the "R" component of the resonant circuit. High resistance in the wire will effect Q much more than distributed capacitance in a carefully wound coil.

Litz has a lower resistance because of what's called the Skin Effect. From just above audio to about 5MHz or so the RF current tends to concentrate on the outer layer of the conductor. Litz wire has more "surface" than solid, stranded wire acts like solid wire at RF if the strands aren't insulated from each other.

I think one of the main reasons the FSLs have such good Q is the monster Litz has very low RF resistance and there's only about 40' of it as compared to 65-80' on an average MW air core loop. The large magnetic aperture probably accounts for the sharper nulls.

I haven't seriously considered building an FSL since I have to get my loop antennas at least 25' above ground to get away from the local RF racket from my neighbors. Remote tuned and rotating active loops are what I've been working on and the weight and wind resistance of a

housing large enough for an FSL make it impractical.

Tim Hills
Sioux Falls, SD

On 1/5/2013 23:24, John Popelish wrote:
>
> On 01/05/2013 09:15 PM, everettsharp@...
> <mailto:everettsharp%40aol.com> wrote:
> > Hi John,
> >
> > It probably does not mean anything if you have enough space between the
> > turns, but when you have the windings next to each other, then
> distributed
> > capacitance does become a major factor. Litz wire does have less
> distributed
> > capacitance when the windings are butted up next to each other, then
> does
> > standard wire.
>
> I didn't know that. Is this a fact you have measured, or a
> claim you have read, somewhere? (I'm sceptical.)
>
> --
> Regards,
>
> John Popelish
>
>

9556. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 11:32:02 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9556

John,

Litz wire reduces the impact of the skin effect and the proximity effect. So for a piratical explanation I have just wound a 18 turn coil with standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the tuning range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46 Litz wire, and I now find the tuning range is 1850 to 405 KHz. So my question to you is if it is not higher distributed capacitance using the solid wire over that of the Litz wire, then what is it that is causing the frequency, at the high end of the band to be lower and having less tuning range? This is not theory, this is what I see from a piratical stand point. I am sure that if you want the theory behind it you can find it somewhere here on the web. (I am not skeptical, I am a believer)

Everett

In a message dated 1/5/2013 11:25:00 P.M. Central Standard Time, jpopelish@... writes:

On 01/05/2013 09:15 PM, _everettsharp@..._
(mailto:everettsharp@...) wrote:
> Hi John,
>
> It probably does not mean anything if you have enough space between the
> turns, but when you have the windings next to each other, then
distributed
> capacitance does become a major factor. Blitz wire does have less
distributed
> capacitance when the windings are butted up next to each other, then does
> standard wire.

I didn't know that. Is this a fact you have measured, or a claim you have read, somewhere? (I'm sceptical.)

--
Regards,

John Popelish

9557. RE: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 12:08:33 UTC
From: dx11
Topic: 9541 Message: 9557

I am not an expert in this field, far from that, but how about the dielectric properties of the coating of each of the Litze wires. Although, now I come to think of it, this would increase the capacitive coupling.

Or is this nonsense?

Cor Beijersbergen

John,

Litz wire reduces the impact of the skin effect and the proximity effect. So for a piratical explanation I have just wound a 18 turn coil with standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the tuning range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46 Litz wire, and I now find the tuning range is 1850 to 405 KHz. So my question to you is if it is not higher distributed capacitance using the solid wire over that of the Litz wire, then what is it that is causing the frequency, at the high end of the band to be lower and having less tuning range? This is not theory, this is what I see from a piratical stand point. I am sure that if you want the theory behind it you can find it somewhere here on the web. (I am not skeptical, I am a believer)

Everett

9558. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 12:14:37 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9558

Hi Tim,

After I posted my article a few months ago on the stacked toroid loop stick experiments, I
had mentioned that I would like to do more experiments, but this time
using FT 240-61 toroids, rather than the FT 140-61 that I used, but that I did
not know if I wanted to spend that much money to try them.

As a result of those comments I got a direct email from a Eb Killer where
he did some experiments with the FT 240-61 toroids and here is the info that
he sent me.

The current coil configuration I arrived at is 2x26 turns
of 660/46 litz on 2 genova S40130 styrene couplings,joined
with a 1" wide 3" pvc pipe to form a 3.5" x 7.5" long bobbin.
The coils ate spaced .75",wound in same direction.
Connected parallel the inductance is 210uH with the 24" rod.
This results in a 0.55" spacing of coil over ferrite.

I tabulated the following data at 650kHz,
rod Q mv normalized
to Q 1000
7.5" 1385 180 mv 144.4

12" 1320 270 mv 204.5

24" 1100 396 mv 360

36" 1050 450 mv 428.5

Amidon 7.5"x.5" 680 76.5 mv 112.5

1 meter loop 155 292 mv 1884

So the reason that I bring this up is Eb was planing on setting up a 24"
long stacked toroid loop stick outside his house and use varicaps to tune
it. Maybe something like this might work for your application? I just don't
know how it would compare to a 8" FSL in performance, which would be a lot
less expensive. Eb got a good deal on his toroids, but if you had to buy them
from kit parts, @ $9 each, it would cost $432. Another option is to build
one using the FT 140-61, it would take 60 of them, but would only be $130.
The 15" one that I experimented with did work very well and it out
performed a 2' air-core box loop. As I had mentioned in some of my earlier post I
have ordered 60 more of the FT 140-61 toroids to do some more experiments
with, but this time with a longer rod, 23" to 24" long and with multi-coils.
You would not have much wind loading with something like this and you
could put it inside PVC pipe to protect it from the weather.

Everett

In a message dated 1/6/2013 5:17:38 A.M. Central Standard Time, thills@...o.net writes:

Just my $0.02.

I have not built an FSL but I've built many (on the order of 100) air and ferrite core tuned loops over the years. I even built a 3' spiral loop with 22 Ga. Sterling Silver wire back when Silver was cheaper.

Distributed capacitance is pretty easy to measure with a signal generator and oscilloscope and a bit of Math. A loop antenna is basically a parallel LCR tuned circuit whose input is the magnetic component of the local RF field. If there's no tuning capacitor hooked to the coil it still has a resonant frequency that can be determined easily enough. Finding the self resonant frequency and then putting a known value capacitor across the coil and measuring that resonate frequency, with a little Math, the distributed capacitance of the coil can be derived.

When working with a new design I use solid or stranded insulated wire with as close to the same diameter as the Litz I plan to use on the final winding to save $ so I've made quite a few measurements of distributed capacitance. What I've found is that with air core loops with 1/4" or more spacing the difference is negligible and with close wound rods it can vary from about 25-35% less with the Litz compared to enamel coated solid wire to 10% or so MORE with the Litz compared to some vinyl coated stranded wire with the same outer diameter as the Litz. Distributed capacitance will lower the Q and narrow the tuning range.

It's my understanding and experience that the main advantage of using Litz wire is it's lower resistance to RF current. Most papers and articles I've seen about resonant loop antennas ignore the "R" component of the resonant circuit. High resistance in the wire will effect Q much more than distributed capacitance in a carefully wound coil.

Litz has a lower resistance because of what's called the Skin Effect. From just above audio to about 5MHz or so the RF current tends to concentrate on the outer layer of the conductor. Litz wire has more "surface" than solid, stranded wire acts like solid wire at RF if the strands aren't insulated from each other.

I think one of the main reasons the FSLs have such good Q is the monster Litz has very low RF resistance and there's only about 40' of it as compared to 65-80' on an average MW air core loop. The large magnetic aperture probably accounts for the sharper nulls.

I haven't seriously considered building an FSL since I have to get my loop antennas at least 25' above ground to get away from the local RF racket from my neighbors. Remote tuned and rotating active loops are what I've been working on and the weight and wind resistance of a housing large enough for an FSL make it impractical.

Tim Hills
Sioux Falls, SD

On 1/5/2013 23:24, John Popelish wrote:

On 01/05/2013 09:15 PM, _everettsharp@..._
(mailto:everettsharp@...) wrote:
> Hi John,
>
> It probably does not mean anything if you have enough space between the
> turns, but when you have the windings next to each other, then
distributed
> capacitance does become a major factor. Litz wire does have less
distributed
> capacitance when the windings are butted up next to each other, then
does
> standard wire.

I didn't know that. Is this a fact you have measured, or a
claim you have read, somewhere? (I'm sceptical.)

--
Regards,

John Popelish

9559. FT-240-61 Prices

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 12:33:56 UTC
From: Jack Smith
Topic: 9541 Message: 9559

Fair-Rite's part number for FT-240-61 cores is 5961003801

A really quick search shows 50-99 lot unit price for these from Kreger Components is $8.10 each, dropping slightly to $7.89 in 100-299 volume.

http://www.kregercomponents.com/fair-rite-products/5961003801

Search for the Fair-Rite part number more and a better price may be found. And, you may negotiate a volume price break with Diz at Kits & Parts for that matter.

Jack K8ZOA

9560. Re: [loopantennas] FT-240-61 Prices

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 12:49:32 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9560

Hi Jack,

Thanks for the info, that would save $48, so now the cost is down to $384, still more then I want to invest to experiment with. I might get interested at $200. I think that they would make a very good loop antenna though.

Everett N8CNP

In a message dated 1/6/2013 6:34:01 A.M. Central Standard Time, Jack.Smith@... writes:

Fair-Rite's part number for FT-240-61 cores is 5961003801

A really quick search shows 50-99 lot unit price for these from Kreger Components is $8.10 each, dropping slightly to $7.89 in 100-299 volume.

http://www.kregercomponents.com/fair-rite-products/5961003801 (http://www.kregercomponents.com/fair-rite-products/5961003801)

Search for the Fair-Rite part number more and a better price may be found. And, you may negotiate a volume price break with Diz at Kits & Parts for that matter.

Jack K8ZOA

9561. Re: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 13:16:57 UTC
From: Everettsharp
Topic: 9541 Message: 9561

Adrian,

I don't know why they did not work, but both articles are posted in the files section of this site.

Everett

Sent from my iPhone

On Jan 5, 2013, at 10:51 PM, Adrian Flynn <ADRIANJAMESFLYNN@...> wrote:

> Everett,
>
> Those links show a 404 error
> Adrian
>
>
>
> On Sat, Jan 5, 2013 at 8:59 PM, <everettsharp@...> wrote:
>>
>>
>> Dean,
>>
>> Don't spend too much time reading that article, the information, good, or bad, will not help you build a FSL. I am going to give you a link to a article that I have posted on this site, which has a ton of information that should be helpful to you if you want to build a FSL.
>>
>> But here is my advise, if you want to build a FSL now, or later, then buy now the 62 x 12 X 4 mm Russian ferrite bars now listed on eBay, as they will not last much longer. There were 3 suppliers of the bars, which have been cleaned out and there is now only one left, he had the higher prices that is why he still has bars left. Even at his current prices they are a bargain.
>>
>> So you need to ask yourself, do I want a single band, or a dual band FSL. If it is a single band then you only need to be 2 bars wide (5"), if you want a dual band then you need to be 3 bars wide (7.5"). It has been proven that a 8" FSL is a good performer, so shoot for that. So if you are going for a single band FSL you will need 86 bars, if you want to go for a dual band FSL then you will need 129 bars.
>>
>> http://f1.grp.yahoofs.com/v1/kMzoUMuW30lYV9RXwkaL4nvR5TASpQ6G49gT5NuJBYmBPoPH9TE5T3bv8PkO8-mx4-9Tqf2REiudBt83MOVUDAjg6YdPQp9YDdgWb24/Experimentswitha7%5B3%5D.pdf
>>
>> Also her is the one on the Stacked Toroid Loop Antenna, which is also avery good loop antenna.
>>

>> http://f1.grp.yahoofs.com/v1/kMzoUJsTN0lYV9RXB4nDB9XB23mnVcUmYIZGQx5Iz2Dk4A3YLY0cDlFd9v
zcTnRVu2z2GS9hBMg2_RzSEzAQBQTGS51Xrfxxb-Rfn4Q/ExperimentsWithaLoopstickAntennausingToroids
%5B1%5D.pdf
>>
>> Everett
>>
>>
>>
>> In a message dated 1/5/2013 4:12:26 P.M. Central Standard Time, dean_0_way@... writes:
>>
>>
>>
>> --- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>> >
>> > Hi Dean,
>> >
>> > Yes I have seen that article, that is what got all of the experimenters
>> > fired up and the low cost Russian ferrite. However when building a larger FSL
>> > you will run into some distributed capacitance issues with standard wire,
>> > which is a Q killer, thus reducing the tuning sharpness and band coverage.
>> > That is why almost of all of the FSL's are built using Litz wire.
>> >
>> > I question some of the theory sited in that article, but it was what got us
>> > all started with experimenting with FSL's.
>> >
>> > Everett
>> >
>> >
>> OH! how i have struggled to understand (visualize) what he is saying in the article!
,after reading it ,well trying to read it a hundred times i just decided to build one some
day and compare it to the 4 foot loop i built ,it was a decent performer , but as you might
guess not useful in my shack.
>>
>> Anyway you guy's should at some point right an article on your findings,one thing i'd
really like to try is take the RF 2200 out into the wasteland with an FSL :)
>>
>> Thanks
>> Dean_0
>
>

9562. Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 16:06:36 UTC
From: Alex P
Topic: 9541 Message: 9562

Parallel inductance of the individual strands of the litz cable will increase the frequency for a constant capacitance and physical topology.

--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
> John,
>
> Litz wire reduces the impact of the skin effect and the proximity effect.
> So for a piratical explanation I have just wound a 18 turn coil with
> standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the tuning
> range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I
> rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46 Litz
> wire, and I now find the tuning range is 1850 to 405 KHz. So my question to you
> is if it is not higher distributed capacitance using the solid wire over
> that of the Litz wire, then what is it that is causing the frequency, at the
> high end of the band to be lower and having less tuning range? This is not
> theory, this is what I see from a piratical stand point. I am sure that if
> you want the theory behind it you can find it somewhere here on the web.
> (I am not skeptical, I am a believer)
>
> Everett
>
>
>
>
>
>
> In a message dated 1/5/2013 11:25:00 P.M. Central Standard Time,
> jpopelish@... writes:
>
>
>
>
> On 01/05/2013 09:15 PM, _everettsharp@..._
> (mailto:everettsharp@...) wrote:
> > Hi John,
> >
> > It probably does not mean anything if you have enough space between the
> > turns, but when you have the windings next to each other, then
> distributed
> > capacitance does become a major factor. Blitz wire does have less
> distributed
> > capacitance when the windings are butted up next to each other, then does
> > standard wire.
>

> I didn't know that. Is this a fact you have measured, or a
> claim you have read, somewhere? (I'm sceptical.)
>
> --
> Regards,
>
> John Popelish
>

9563. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 16:15:47 UTC
From: John Popelish
Topic: 9541 Message: 9563

On 01/06/2013 06:32 AM, everettsharp@... wrote:
> John,
>
> Litz wire reduces the impact of the skin effect and the proximity effect.
> So for a piratical explanation I have just wound a 18 turn coil with
> standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the tuning
> range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I
> rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46 Litz
> wire, and I now find the tuning range is 1850 to 405 KHz. So my question to you
> is if it is not higher distributed capacitance using the solid wire over
> that of the Litz wire, then what is it that is causing the frequency, at the
> high end of the band to be lower and having less tuning range? This is not
> theory, this is what I see from a piratical stand point. I am sure that if
> you want the theory behind it you can find it somewhere here on the web.
> (I am not skeptical, I am a believer)

Thanks, Everett. That is the sort of experimental result I
was looking for.

One more question. Was the length (across the turns) of the
18 turn Litz coil the same as the length of the 18 turn
solid wire coil? In other words, was the 18 gauge solid
wire the same width as the (as wound) Litz wire?

--
Regards,

John Popelish

9564. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 16:16:53 UTC
From: Alberto I2PHD
Topic: 9546 Message: 9564

Thanks to all who gave advice.

@Jack : yes, maybe better transistors should be used. And probably the amplifier has too much gain.
The PSpice simulation (FWIW) says that the gain from the loop input to the output is around 56 dB,
and such a high value is almost certainly the cause of the intermodulation, which, to be honest, is
not very severe, but at night it is quite perceptible.

@Todd : I have just given a look at the M0AYF schematic. Interesting, even if I do not understand
why he used a common emitter configuration, which does not exploit the very low impedance of the
loop, and makes shielding probably necessary. Anyway I will try to build it.

@Nick : it looks like yours is a tuned loop, in which case a coverage, as I would like to have, from
60 kHz to 21 MHZ is just impossible with a single variable capacitor. Mine is an aperiodic loop closed
on a very low impedance load, no tuning needed.

Another circuit I intend to test is the so-called noiseless Norton feedback, with a trifilar winding on
a ferrite bead, in a balanced configuration. If any of you has positive or negative experiences with
that, I would like to know them, thanks.

TNX

73 Alberto I2PHD

9565. Re: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 16:27:16 UTC
From: John Popelish
Topic: 9541 Message: 9565

On 01/06/2013 11:06 AM, Alex P wrote:
> Parallel inductance of the individual strands of the litz cable
> will increase the frequency for a constant capacitance and physical topology.

Are you saying, that for a given overall wire diameter (not
a given metal cross section), Litz has a lower inductance
per foot than solid conductor does? If so, do you have a
comparative experiment or manufacturer's data to quantify that?

--
Regards,

John Popelish

9566. Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 16:37:03 UTC
From: ylo58
Topic: 9541 Message: 9566

The encoded Yahoo path expires really fast, it seems that a "human-readable" path is converted on the fly:

http://groups.yahoo.com/group/loopantennas/files/Experimentswitha7%5B3%5D.pdf
http://groups.yahoo.com/group/loopantennas/files/ExperimentsWithaLoopstickAntennausingToroids%5B1%5D.pdf

Regards,

Ulo

--- In loopantennas@yahoogroups.com, Everettsharp wrote:
>
> Adrian,
>
> I don't know why they did not work, but both articles are posted in the files section of this site.
>
> Everett
>
> Sent from my iPhone
>
> On Jan 5, 2013, at 10:51 PM, Adrian Flynn wrote:
>
> > Everett,
> >
> > Those links show a 404 error
> > Adrian
> >
> >
> >
> > On Sat, Jan 5, 2013 at 8:59 PM, wrote:
> >>
> >>
> >> Dean,
> >>
> >> Don't spend too much time reading that article, the information, good, or bad, will not help you build a FSL. I am going to give you a link to a article that I have posted on this site, which has a ton of information that should be helpful to you if you want to build a FSL.
> >>
> >> But here is my advise, if you want to build a FSL now, or later, then buy now the 62 x 12 X 4 mm Russian ferrite bars now listed on eBay, as they will not last much longer. There were 3 suppliers of the bars, which have been cleaned out and there is now only one left, he had the higher prices that is why he still has bars left. Even at his current prices they are a bargain.

> >>
> >> So you need to ask yourself, do I want a single band, or a dual band FSL. If it is a single band then you only need to be 2 bars wide (5"), if you want a dual band then you need to be 3 bars wide (7.5"). It has been proven that a 8" FSL is a good performer, so shoot for that. So if you are going for a single band FSL you will need 86 bars, if you want to go for a dual band FSL then you will need 129 bars.
> >>
> >> http://f1.grp.yahoofs.com/v1/kMzoUMuW30lYV9RXwkaL4nvR5TASpQ6G49gT5NuJBYmBPoPH9TE5T3bv8PkO8-mx4-9Tqf2REiudBt83MOVUDAjg6YdPQp9YDdgWb24/Experimentswitha7%5B3%5D.pdf
> >>
> >> Also her is the one on the Stacked Toroid Loop Antenna, which is also avery good loop antenna.
> >>
> >> http://f1.grp.yahoofs.com/v1/kMzoUJsTN0lYV9RXB4nDB9XB23mnVcUmYIZGQx5Iz2Dk4A3YLY0cDlFd9vzcTnRVu2z2GS9hBMg2_RzSEzAQBQTGS51Xrfxxb-Rfn4Q/ExperimentsWithaLoopstickAntennausingToroids%5B1%5D.pdf
> >>
> >> Everett
> >>
> >>
> >>
> >> In a message dated 1/5/2013 4:12:26 P.M. Central Standard Time, dean_0_way@... writes:
> >>
> >>
> >>
> >> --- In loopantennas@yahoogroups.com, everettsharp@ wrote:
> >> >
> >> > Hi Dean,
> >> >
> >> > Yes I have seen that article, that is what got all of the experimenters
> >> > fired up and the low cost Russian ferrite. However when building a larger FSL
> >> > you will run into some distributed capacitance issues with standard wire,
> >> > which is a Q killer, thus reducing the tuning sharpness and band coverage.
> >> > That is why almost of all of the FSL's are built using Litz wire.
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> >> > I question some of the theory sited in that article, but it was what got us
> >> > all started with experimenting with FSL's.
> >> >
> >> > Everett
> >> >
> >> >
> >> OH! how i have struggled to understand (visualize) what he is saying in the article! ,after reading it ,well trying to read it a hundred times i just decided to build one some day and compare it to the 4 foot loop i built ,it was a decent performer , but as you might guess not useful in my shack.
> >>
> >> Anyway you guy's should at some point right an article on your findings,one thing i'd really like to try is take the RF 2200 out into the wasteland with an FSL :)
> >>
> >> Thanks

> >> Dean_0
> >
> >
>

9567. Re: [loopantennas] Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 17:16:36 UTC
From: Chris Trask
Topic: 9546 Message: 9567

>
>Another circuit I intend to test is the so-called noiseless Norton feedback, with a trifilar winding on
>a ferrite bead, in a balanced configuration. If any of you has positive or negative experiences with
>that, I would like to know them, thanks.
>

The first stage needs to be very low input impedance, and Norton feedback amplifiers do not work well in that area. Very good for subsequent stages, though.

Somewhere in the group files section I have a design for a 2-stage active loop amplifier, named WidebandLoopAntennaAmplifierRevA.pdf that shows how to make wideband low input impedance amplifiers.

Chris

9568. Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 17:18:35 UTC
From: AlienRelics
Topic: 9541 Message: 9568

Did you mean "empirical"?

Series resistance will also lower the frequency of a tuned circuit. By what can be a rather surprising amount for a small resistance.

Scroll to the bottom of the followin link to resonance with impure components. The R is the series resistance of both the capacitor (usually negligible) and the inductor. Not the DC resistance, but the resistive component at frequency. So the skin effect is going to have an affect on this number.

<http://www.electronics-tutorials.ws/accircuits/parallel-resonance.html>

Fc = 1/(2pi) * (1/LC - R^2/L^2)^-2

Kinda hard to write that out in plain text.

In any case, where capacitance is high (and therefore frequency low), then the term 1/LC would tend to dominate over the term R^2/L^2. So 400kHz vs 405kHz.

But where C becomes very low, the term R^2/L^2 is going to dominate, and so with a larger Rseries, the frequency shift is going to be greater. I'm sure it doesn't account for all of the shift downwards for the solid wire, as with close windings I would imagine there will be more significant effects.

But - with only two samples, it is hard to say what all the major effects would be. Does that litz wire add up to the same cross section of copper? Or the same outside diameter? Or is it entirely different? How close to identical are the coils otherwise?

To get more consistent results, I might try cutting threads into plastic holders to get more consistent turns.

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
> John,
>
> Litz wire reduces the impact of the skin effect and the proximity effect.
> So for a piratical explanation I have just wound a 18 turn coil with
> standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the tuning
> range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I
> rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46 Litz
> wire, and I now find the tuning range is 1850 to 405 KHz. So my question to you
> is if it is not higher distributed capacitance using the solid wire over
> that of the Litz wire, then what is it that is causing the frequency, at the
> high end of the band to be lower and having less tuning range? This is not
> theory, this is what I see from a piratical stand point. I am sure that if
> you want the theory behind it you can find it somewhere here on the web.

> (I am not skeptical, I am a believer)
>
> Everett
>
>
>
>
>
>
> In a message dated 1/5/2013 11:25:00 P.M. Central Standard Time,
> jpopelish@... writes:
>
>
>
>
> On 01/05/2013 09:15 PM, _everettsharp@..._
> (mailto:everettsharp@...) wrote:
> > Hi John,
> >
> > It probably does not mean anything if you have enough space between the
> > turns, but when you have the windings next to each other, then
> distributed
> > capacitance does become a major factor. Blitz wire does have less
> distributed
> > capacitance when the windings are butted up next to each other, then does
> > standard wire.
>
> I didn't know that. Is this a fact you have measured, or a
> claim you have read, somewhere? (I'm sceptical.)
>
> --
> Regards,
>
> John Popelish
>

9569. Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 17:22:07 UTC
From: AlienRelics
Topic: 9541 Message: 9569

Distributed capacitance reduces the tuning range.

Losses in the core and wires are the Q killers. Litz wire has lower skin effect losses than solid wire.

If it were mainly distributed capacitance that lowered Q, then you could defeat that by using thinner solid wire and increasing the spacing between turns.

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
> Hi Dean,
>
> Yes I have seen that article, that is what got all of the experimenters
> fired up and the low cost Russian ferrite. However when building a larger FSL
> you will run into some distributed capacitance issues with standard wire,
> which is a Q killer, thus reducing the tuning sharpness and band coverage.
> That is why almost of all of the FSL's are built using Litz wire.
>
> I question some of the theory sited in that article, but it was what got us
> all started with experimenting with FSL's.
>
> Everett
>
>
> In a message dated 1/4/2013 11:54:04 P.M. Central Standard Time,
> dean_0_way@... writes:
>
>
>
>
> Just wondered if you had seen this?
>
> No litz used ?
>
> Dean_0
>
> _http://www.gmweb2.net/The%20FS%20Loop.htm_
> (http://www.gmweb2.net/The%20FS%20Loop.htm)
>

9570. Re: [loopantennas] Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 17:28:28 UTC
From: toddroberts2001@aol.com
Topic: 9546 Message: 9570

Hi Alberto,
As I understand it the M0AYF preamp is very stable and many people have had good results building it on perfboard, groundplane, or even design their own pc board for it. Nothing critical about the layout. No shielding necessary.

Steve Ratzlaff also came up with a good improvement to the circuit using a trifilar output transformer in place of the original bifilar windings. This gives higher output and better IMD performance over the original circuit.

73 - Todd WD4NGG

In a message dated 1/6/2013 11:17:02 A.M. Eastern Standard Time, i2phd@... writes:
@Todd : I have just given a look at the M0AYF schematic. Interesting, even if I do not understand
why he used a common emitter configuration, which does not exploit the very low impedance of the
loop, and makes shielding probably necessary. Anyway I will try to build it.

9571. Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 17:51:02 UTC
From: Alex P
Topic: 9541 Message: 9571

John,

Please carefully re-read Everett's post where he has the experimental data which I quote in part as follows:

"... I have just wound a 18 turn coil with standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the tuning range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46 Litz wire, and I now find the tuning range is 1850 to 405 KHz..."

Unfortunately, no wire diameter is given but the inference is that the litz diameter would be the same or greater than the 18 gauge solid. Given the foregoing test data and knowledge of litz wire construction where there are parallel inductances and knowing the basic concept of parallel inductances, a reasonable technical inference can be made which explains the frequency range difference.

Now as to your question, I performed some toroid experiments a couple years ago with 12 gauge solid wire and approximately equivalent 12 gauge diameter litz cable on the same core type. Same lengths, same permeability etc.etc. Using a precision VNA, the upper break frequency was at a higher frequency with the litz than with the solid wire. The lower break frequency was shifted upward slightly as well.

Perhaps you could make your own measurements and report back to the group on your particular application.

As to litz wire (cable), not all "litz" is the same. There is a wide variety of mechanical 'lay', construction winding variations and weave angles which affect the distributed capacitances, inductances and resistances which affect the reactances/impedance of the cable. All of the foregoing affects the antenna resonant frequency range, Q, etc.
To your point and given the foregoing, litz diameter is not necessarily the predominant governing attribute.

Regards

--- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> On 01/06/2013 11:06 AM, Alex P wrote:
> > Parallel inductance of the individual strands of the litz cable
> > will increase the frequency for a constant capacitance and physical topology.
>
> Are you saying, that for a given overall wire diameter (not
> a given metal cross section), Litz has a lower inductance
> per foot than solid conductor does? If so, do you have a
> comparative experiment or manufacturer's data to quantify that?
>
> --
> Regards,

>
> John Popelish
>

9572. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 18:08:59 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9572

John,

I don't know what the length was of the two wires, as I did not measure them. However, the cross section area of 660/46 Litz wire is nearly the same as solid 18 gage wire.

Everett

In a message dated 1/6/2013 10:16:04 A.M. Central Standard Time, jpopelish@... writes:

On 01/06/2013 06:32 AM, _everettsharp@..._
(mailto:everettsharp@...m) wrote:
> John,
>
> Litz wire reduces the impact of the skin effect and the proximity effect.
> So for a piratical explanation I have just wound a 18 turn coil with
> standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the
tuning
> range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I
> rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46
Litz
> wire, and I now find the tuning range is 1850 to 405 KHz. So my question
to you
> is if it is not higher distributed capacitance using the solid wire over
> that of the Litz wire, then what is it that is causing the frequency, at
the
> high end of the band to be lower and having less tuning range? This is
not
> theory, this is what I see from a piratical stand point. I am sure that
if
> you want the theory behind it you can find it somewhere here on the web.
> (I am not skeptical, I am a believer)

Thanks, Everett. That is the sort of experimental result I
was looking for.

One more question. Was the length (across the turns) of the
18 turn Litz coil the same as the length of the 18 turn
solid wire coil? In other words, was the 18 gauge solid
wire the same width as the (as wound) Litz wire?

--
Regards,

John Popelish

9573. Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 18:13:15 UTC
From: Alex P
Topic: 9541 Message: 9573

Everett,

Thanks for clarifying on the litz diameter.

Alex

--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
> John,
>
> I don't know what the length was of the two wires, as I did not measure
> them. However, the cross section area of 660/46 Litz wire is nearly the same
> as solid 18 gage wire.
>
> Everett
>
>
> In a message dated 1/6/2013 10:16:04 A.M. Central Standard Time,
> jpopelish@... writes:
>
>
>
>
> On 01/06/2013 06:32 AM, _everettsharp@..._
> (mailto:everettsharp@...) wrote:
> > John,
> >
> > Litz wire reduces the impact of the skin effect and the proximity effect.
> > So for a piratical explanation I have just wound a 18 turn coil with
> > standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the
> tuning
> > range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I
> > rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46
> Litz
> > wire, and I now find the tuning range is 1850 to 405 KHz. So my question
> to you
> > is if it is not higher distributed capacitance using the solid wire over
> > that of the Litz wire, then what is it that is causing the frequency, at
> the
> > high end of the band to be lower and having less tuning range? This is
> not
> > theory, this is what I see from a piratical stand point. I am sure that
> if
> > you want the theory behind it you can find it somewhere here on the web.
> > (I am not skeptical, I am a believer)
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> Thanks, Everett. That is the sort of experimental result I
> was looking for.
>
> One more question. Was the length (across the turns) of the
> 18 turn Litz coil the same as the length of the 18 turn
> solid wire coil? In other words, was the 18 gauge solid
> wire the same width as the (as wound) Litz wire?
>
> --
> Regards,
>
> John Popelish
>

9574. Re: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 18:22:38 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9574

Alex,

However, I would have to say that the Litz wire bundle of 660 strands, each with a insulated coating does make the bundle larger, how much larger, I don't know? I sure looks bigger, a lot bigger.

Everett

In a message dated 1/6/2013 12:13:20 P.M. Central Standard Time, winston376@... writes:

Everett,

Thanks for clarifying on the litz diameter.

Alex

--- In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
, everettsharp@... wrote:
>
> John,
>
> I don't know what the length was of the two wires, as I did not measure
> them. However, the cross section area of 660/46 Litz wire is nearly the
same
> as solid 18 gage wire.
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> Everett
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>
> In a message dated 1/6/2013 10:16:04 A.M. Central Standard Time,
> jpopelish@... writes:
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> On 01/06/2013 06:32 AM, _everettsharp@..._
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> > John,
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> > Litz wire reduces the impact of the skin effect and the proximity
effect.
> > So for a piratical explanation I have just wound a 18 turn coil with
> > standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the

> tuning
> > range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz.

Now I
> > rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46
> Litz
> > wire, and I now find the tuning range is 1850 to 405 KHz. So my
question
> to you
> > is if it is not higher distributed capacitance using the solid wire
over
> > that of the Litz wire, then what is it that is causing the frequency,
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> the
> > high end of the band to be lower and having less tuning range? This is
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> > theory, this is what I see from a piratical stand point. I am sure
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> > you want the theory behind it you can find it somewhere here on the
web.
> > (I am not skeptical, I am a believer)
>
> Thanks, Everett. That is the sort of experimental result I
> was looking for.
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> One more question. Was the length (across the turns) of the
> 18 turn Litz coil the same as the length of the 18 turn
> solid wire coil? In other words, was the 18 gauge solid
> wire the same width as the (as wound) Litz wire?
>
> --
> Regards,
>
> John Popelish
>

9575. RE: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 19:07:03 UTC
From: John Bruckner
Topic: 9541 Message: 9575

I just measured some 660/46 litz at AWG 15.

John

WØHII

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of everettsharp@...
Sent: Sunday, January 06, 2013 12:23 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: fs loop article

Alex,

However, I would have to say that the Litz wire bundle of 660 strands, each with a insulated coating does make the bundle larger, how much larger, I don't know? I sure looks bigger, a lot bigger.

Everett

In a message dated 1/6/2013 12:13:20 P.M. Central Standard Time, winston376@... writes:

Everett,

Thanks for clarifying on the litz diameter.

Alex

--- In loopantennas@yahoogroups.com <mailto:loopantennas%40yahoogroups.com> , everettsharp@... wrote:
>
> John,
>
> I don't know what the length was of the two wires, as I did not measure
> them. However, the cross section area of 660/46 Litz wire is nearly the same
> as solid 18 gage wire.
>
> Everett
>
>
> In a message dated 1/6/2013 10:16:04 A.M. Central Standard Time,
> jpopelish@... writes:
>
>
>
>
> On 01/06/2013 06:32 AM, _everettsharp@..._
> (mailto:everettsharp@...) wrote:

> > John,
> >
> > Litz wire reduces the impact of the skin effect and the proximity effect.
> > So for a piratical explanation I have just wound a 18 turn coil with
> > standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the
> tuning
> > range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz. Now I
> > rewind a 18 turn coil, close wound, on the same 7.5" FSL using 660/46
> Litz
> > wire, and I now find the tuning range is 1850 to 405 KHz. So my question
> to you
> > is if it is not higher distributed capacitance using the solid wire over
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> > (I am not skeptical, I am a believer)
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> Thanks, Everett. That is the sort of experimental result I
> was looking for.
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> One more question. Was the length (across the turns) of the
> 18 turn Litz coil the same as the length of the 18 turn
> solid wire coil? In other words, was the 18 gauge solid
> wire the same width as the (as wound) Litz wire?
>
> --
> Regards,
>
> John Popelish
>

9576. Re: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 19:15:21 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9576

John,

Did you count all of the stands to make sure none were missing before
making that measurement? What did you use to measure it with, what was the room
temperature? Did I miss anything?

Everett

In a message dated 1/6/2013 1:06:58 P.M. Central Standard Time,
jbruckner@cox.net writes:

I just measured some 660/46 litz at AWG 15.
John
WØHII

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
On Behalf Of everettsharp@aol.com
Sent: Sunday, January 06, 2013 12:23 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: fs loop article

Alex,

However, I would have to say that the Litz wire bundle of 660 strands,
each with a insulated coating does make the bundle larger, how much larger, I
don't know? I sure looks bigger, a lot bigger.

Everett

In a message dated 1/6/2013 12:13:20 P.M. Central Standard Time,
winston376@yahoo.com (mailto:winston376@yahoo.com) writes:

Everett,

Thanks for clarifying on the litz diameter.

Alex

--- In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
, everettsharp@... wrote:
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> John,
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> I don't know what the length was of the two wires, as I did not measure
> them. However, the cross section area of 660/46 Litz wire is nearly the
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> as solid 18 gage wire.
>

> Everett
>
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> In a message dated 1/6/2013 10:16:04 A.M. Central Standard Time,
> jpopelish@... writes:
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>
> On 01/06/2013 06:32 AM, __everettsharp@..._ (mailto:_everettsharp@..._)

> (_mailto:everettsharp@_ (mailto:everettsharp@) ...) wrote:
> > John,
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effect.
> > So for a piratical explanation I have just wound a 18 turn coil with
> > standard solid 18 gage wire, close wound, on a 7.5" FSL and I find the
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> > range (using a 10 to 381 pf variable capacitor) is 1200 to 400 KHz.
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> One more question. Was the length (across the turns) of the
> 18 turn Litz coil the same as the length of the 18 turn
> solid wire coil? In other words, was the 18 gauge solid
> wire the same width as the (as wound) Litz wire?
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> Regards,

>
> John Popelish
>

9577. RE: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 19:20:39 UTC
From: John Bruckner
Topic: 9541 Message: 9577

Hi Everett,

LOL. As measured with a General Hardware Mfg. #20 Gauge….I know, has this gone on too long already?

John

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of everettsharp@...
Sent: Sunday, January 06, 2013 1:15 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: fs loop article

John,

Did you count all of the stands to make sure none were missing before making that measurement? What did you use to measure it with, what was the room temperature? Did I miss anything?

Everett

In a message dated 1/6/2013 1:06:58 P.M. Central Standard Time, jbruckner@... writes:

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John

WØHII

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of everettsharp@...
Sent: Sunday, January 06, 2013 12:23 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: fs loop article

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Everett

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Everett,

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Alex

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> John,
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> was looking for.
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> 18 turn Litz coil the same as the length of the 18 turn
> solid wire coil? In other words, was the 18 gauge solid
> wire the same width as the (as wound) Litz wire?
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> --
> Regards,
>
> John Popelish
>

9578. Re: [loopantennas] Re: fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 19:25:00 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9578

Thanks John, now its clear, I think??????????

Everett

In a message dated 1/6/2013 1:20:36 P.M. Central Standard Time,
jbruckner@... writes:

Hi Everett,
LOL. As measured with a General Hardware Mfg. #20 Gauge….I know, has this
gone on too long already?
John

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
On Behalf Of everettsharp@...
Sent: Sunday, January 06, 2013 1:15 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: fs loop article

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Everett

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John
WØHII

From: _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
[_mailto:loopantennas@yahoogroups.com_
(mailto:loopantennas@yahoogroups.com)] On Behalf Of _everettsharp@..._
(mailto:everettsharp@...)
Sent: Sunday, January 06, 2013 12:23 PM
To: _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
Subject: Re: [loopantennas] Re: fs loop article

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Everett

In a message dated 1/6/2013 12:13:20 P.M. Central Standard Time,
winston376@... (mailto:winston376@...) writes:

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> I don't know what the length was of the two wires, as I did not measure
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>
> --
> Regards,
>
> John Popelish
>

9579. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 19:30:18 UTC
From: Tim Hills
Topic: 9541 Message: 9579

Heya Everett.

I've been using varactors for tuning loops for over 20 years now. ;-) There's pics of a couple of loops that have now been recycled in the "LoopyLoops" folder in the group photo section.

Most of what I've been doing lately is with active ferrite loops using a regenerative winding with gain controlled amplifiers. I have a rotator that was from a marine ADF that I modified and it's in the attic over the garage with a 23" round loop and there's a tunable 8" rod mounted 25' up with the local "pest" in the null.

My latest project is an electronically "rotatable" antenna using 3 rods mounted 120* from each other with the varactor bank switched between them. The two inactive loops don't interact (much) with the active one when the coils are left open and a tuned active whip is phased against the active rod. I can get a very nice front or back facing cardioid and by increasing the gain on the whip from that point a cloverleaf null pattern of varying angles. Not a perfect solution but a compact and lightweight one. Using 8 inch rods in a triangle the whole thing fits in a 12" diameter by 1 1/2" enclosure and weighs 3# or so.

I'm also using twin RG6, one carries the L.O. from a digital VFO and the first IF/mixer will also be built into the antenna housing at 10.7 MHz and fed down the other RG6. The vast majority of local noise is below 3MHz so upmixing at the antenna makes more sense technically and economically than trying to shield almost 100'. No point getting a good, clean signal just to have it swamped by garbage in the feed line. At night I have 5KW (1320) and 10KW (1140) stations beaming their night pattern into my back yard at 6 Miles each and a 400W-ND (1000) almost IN my back yard. Does make checking for intermod in my amps easy though.

The rods only have 16T of 100/44 Litz and the varactor bank is 2 sets of 26 parallel MVAM109s, about 6000pF at 1V and 380 pF at 9V. The windings are wound on a cardboard sleeve so I can move them for fine tuning. All can be tuned from 520 to 1750 KHz and have pretty narrow bandwidth (Q) without regen though I haven't taken any actual measurements yet. The whip uses a tapped torroid inductor and 8 more of the MVAM109s for tuning. The hand picked and matched varactors I'm using can be "pushed" to 10.5V so I can also cover the 160M band by overdriving the varactors.

The varactors were bought in a lot of 300, plus the 125 I already had and all were tested for capacitance at 5 voltages and for noise. If someone is using the surplus MVAM109s they should test them first. About 10% are noisy, another 10% or so have a poor 1V/9V capacitance ratio, low capactitance and poor V-C curves take out about 1/4 of them, leaving

50% pretty much unusable. About 30% of them are very quiet with a ~14:1 1V/9Vratio and perform well (noise) up to 11V, those are my preferred units and I'm using 60 of the 120 I have of them on this project

Doing this in my spare time when I can duck the Honeydo list so there have been lapses of a month in testing/building sessions so enough writing about it and back to the bench before she finds something that HAS to be done immediately.

Tim Hills
Sioux Falls, SD

On 1/6/2013 6:14, everettsharp@... wrote:
>
> Hi Tim,
> After I posted my article a few months ago on the stacked toroid loop
> stick experiments, I
> had mentioned that I would like to do more experiments, but this time
> using FT 240-61 toroids, rather than the FT 140-61 that I used, but
> that I did not know if I wanted to spend that much money to try them.
> As a result of those comments I got a direct email from a Eb Killer
> where he did some experiments with the FT 240-61 toroids and here is
> the info that he sent me.
> The current coil configuration I arrived at is 2x26 turns
> of 660/46 litz on 2 genova S40130 styrene couplings,joined
> with a 1" wide 3" pvc pipe to form a 3.5" x 7.5" long bobbin.
> The coils ate spaced .75",wound in same direction.
> Connected parallel the inductance is 210uH with the 24" rod.
> This results in a 0.55" spacing of coil over ferrite.
>
> I tabulated the following data at 650kHz,
> rod Q mv normalized
> to Q 1000
> 7.5" 1385 180 mv 144.4
>
> 12" 1320 270 mv 204.5
>
> 24" 1100 396 mv 360
>
> 36" 1050 450 mv 428.5
>
> Amidon 7.5"x.5" 680 76.5 mv 112.5
>
> 1 meter loop 155 292 mv 1884
> So the reason that I bring this up is Eb was planing on setting up a
> 24" long stacked toroid loop stick outside his house and use varicaps
> to tune it. Maybe something like this might work for your application?
> I just don't know how it would compare to a 8" FSL in performance,
> which would be a lot less expensive. Eb got a good deal on his
> toroids, but if you had to buy them from kit parts, @ $9 each, it
> would cost $432. Another option is to build one using the FT 140-61,

> it would take 60 of them, but would only be $130. The 15" one that I
> experimented with did work very well and it out performed a 2'
> air-core box loop. As I had mentioned in some of my earlier post I
> have ordered 60 more of the FT 140-61 toroids to do some more
> experiments with, but this time with a longer rod, 23" to 24" long and
> with multi-coils. You would not have much wind loading with something
> like this and you could put it inside PVC pipe to protect it from the
> weather.
> Everett
> In a message dated 1/6/2013 5:17:38 A.M. Central Standard Time,
> thills@... writes:
>
> Just my $0.02.
>
> I have not built an FSL but I've built many (on the order of 100)
> air and ferrite core tuned loops over the years. I even built a 3'
> spiral loop with 22 Ga. Sterling Silver wire back when Silver was
> cheaper.
>
> Distributed capacitance is pretty easy to measure with a signal
> generator and oscilloscope and a bit of Math. A loop antenna is
> basically a parallel LCR tuned circuit whose input is the magnetic
> component of the local RF field. If there's no tuning capacitor
> hooked to the coil it still has a resonant frequency that can be
> determined easily enough. Finding the self resonant frequency and
> then putting a known value capacitor across the coil and measuring
> that resonate frequency, with a little Math, the distributed
> capacitance of the coil can be derived.
>
> When working with a new design I use solid or stranded insulated
> wire with as close to the same diameter as the Litz I plan to use
> on the final winding to save $ so I've made quite a few
> measurements of distributed capacitance. What I've found is that
> with air core loops with 1/4" or more spacing the difference is
> negligible and with close wound rods it can vary from about 25-35%
> less with the Litz compared to enamel coated solid wire to 10% or
> so MORE with the Litz compared to some vinyl coated stranded wire
> with the same outer diameter as the Litz. Distributed capacitance
> will lower the Q and narrow the tuning range.
>
> It's my understanding and experience that the main advantage of
> using Litz wire is it's lower resistance to RF current. Most
> papers and articles I've seen about resonant loop antennas ignore
> the "R" component of the resonant circuit. High resistance in the
> wire will effect Q much more than distributed capacitance in a
> carefully wound coil.
>
> Litz has a lower resistance because of what's called the Skin
> Effect. From just above audio to about 5MHz or so the RF current
> tends to concentrate on the outer layer of the conductor. Litz

> wire has more "surface" than solid, stranded wire acts like solid
> wire at RF if the strands aren't insulated from each other.
>
> I think one of the main reasons the FSLs have such good Q is the
> monster Litz has very low RF resistance and there's only about 40'
> of it as compared to 65-80' on an average MW air core loop. The
> large magnetic aperture probably accounts for the sharper nulls.
>
> I haven't seriously considered building an FSL since I have to get
> my loop antennas at least 25' above ground to get away from the
> local RF racket from my neighbors. Remote tuned and rotating
> active loops are what I've been working on and the weight and wind
> resistance of a housing large enough for an FSL make it impractical.
>
> Tim Hills
> Sioux Falls, SD
>
> On 1/5/2013 23:24, John Popelish wrote:
>>
>> On 01/05/2013 09:15 PM, everettsharp@...
>> <mailto:everettsharp%40aol.com> wrote:
>> > Hi John,
>> >
>> > It probably does not mean anything if you have enough space
>> between the
>> > turns, but when you have the windings next to each other, then
>> distributed
>> > capacitance does become a major factor. Litz wire does have
>> less distributed
>> > capacitance when the windings are butted up next to each other,
>> then does
>> > standard wire.
>>
>> I didn't know that. Is this a fact you have measured, or a
>> claim you have read, somewhere? (I'm sceptical.)
>>
>> --
>> Regards,
>>
>> John Popelish
>>
>>
>
>
>

9580. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 20:02:29 UTC
From: W2XJ
Topic: 9541 Message: 9580

Tim

Can you post some schematics?

Sent from my iPad

On Jan 6, 2013, at 2:30 PM, Tim Hills <thills@...> wrote:

> Heya Everett.
>
> I've been using varactors for tuning loops for over 20 years now. ;-) There's pics of a couple of loops that have now been recycled in the "LoopyLoops" folder in the group photo section.
>
> Most of what I've been doing lately is with active ferrite loops using a regenerative winding with gain controlled amplifiers. I have a rotator that was from a marine ADF that I modified and it's in the attic over the garage with a 23" round loop and there's a tunable 8" rod mounted 25' up with the local "pest" in the null.
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> My latest project is an electronically "rotatable" antenna using 3 rods mounted 120* from each other with the varactor bank switched between them. The two inactive loops don't interact (much) with the active one when the coils are left open and a tuned active whip is phased against the active rod. I can get a very nice front or back facing cardioid and by increasing the gain on the whip from that point a cloverleaf null pattern of varying angles. Not a perfect solution but a compact and lightweight one. Using 8 inch rods in a triangle the whole thing fits in a 12" diameter by 1 1/2" enclosure and weighs 3# or so.
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> I'm also using twin RG6, one carries the L.O. from a digital VFO and the first IF/mixer will also be built into the antenna housing at 10.7 MHz and fed down the other RG6. The vast majority of local noise is below 3MHz so upmixing at the antenna makes more sense technically and economically than trying to shield almost 100'. No point getting a good, clean signal just to have it swamped by garbage in the feed line. At night I have 5KW (1320) and 10KW (1140) stations beaming their night pattern into my back yard at 6 Miles each and a 400W-ND (1000) almost IN my back yard. Does make checking for intermod in my amps easy though.
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> The rods only have 16T of 100/44 Litz and the varactor bank is 2 sets of 26 parallel MVAM109s, about 6000pF at 1V and 380 pF at 9V. The windings are wound on a cardboard sleeve so I can move them for fine tuning. All can be tuned from 520 to 1750 KHz and have pretty narrow bandwidth (Q) without regen though I haven't taken any actual measurements yet. The whip uses a tapped torroid inductor and 8 more of the MVAM109s for tuning. The hand picked and matched varactors I'm using can be "pushed" to 10.5V so I can also cover the 160M band by overdriving the varactors.
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>
> Tim Hills
> Sioux Falls, SD
>
> On 1/6/2013 6:14, everettsharp@... wrote:
>>
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>> Hi Tim,
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>> As a result of those comments I got a direct email from a Eb Killer where he did some experiments with the FT 240-61 toroids and here is the info that he sent me.
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>> of 660/46 litz on 2 genova S40130 styrene couplings,joined
>> with a 1" wide 3" pvc pipe to form a 3.5" x 7.5" long bobbin.
>> The coils ate spaced .75",wound in same direction.
>> Connected parallel the inductance is 210uH with the 24" rod.
>> This results in a 0.55" spacing of coil over ferrite.
>>
>> I tabulated the following data at 650kHz,
>> rod Q mv normalized
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>> 7.5" 1385 180 mv 144.4
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>> 36" 1050 450 mv 428.5
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>> Amidon 7.5"x.5" 680 76.5 mv 112.5
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>> 1 meter loop 155 292 mv 1884
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>> So the reason that I bring this up is Eb was planing on setting up a 24" long stacked toroid loop stick outside his house and use varicaps to tune it. Maybe something like this

might work for your application? I just don't know how it would compare to a 8" FSL in performance, which would be a lot less expensive. Eb got a good deal on his toroids, but if you had to buy them from kit parts, @ $9 each, it would cost $432. Another option is to build one using the FT 140-61, it would take 60 of them, but would only be $130. The 15" one that I experimented with did work very well and it out performed a 2' air-core box loop. As I had mentioned in some of my earlier post I have ordered 60 more of the FT 140-61 toroids to do some more experiments with, but this time with a longer rod, 23" to 24" long and with multi-coils. You would not have much wind loading with something like this and you could put it inside PVC pipe to protect it from the weather.
>>
>> Everett
>>
>> In a message dated 1/6/2013 5:17:38 A.M. Central Standard Time, thills@... writes:
>>
>> Just my $0.02.
>>
>> I have not built an FSL but I've built many (on the order of 100) air and ferrite core tuned loops over the years. I even built a 3' spiral loop with 22 Ga. Sterling Silver wire back when Silver was cheaper.
>>
>> Distributed capacitance is pretty easy to measure with a signal generator and oscilloscope and a bit of Math. A loop antenna is basically a parallel LCR tuned circuit whose input is the magnetic component of the local RF field. If there's no tuning capacitor hooked to the coil it still has a resonant frequency that can be determined easily enough. Finding the self resonant frequency and then putting a known value capacitor across the coil and measuring that resonate frequency, with a little Math, the distributed capacitance of the coil can be derived.
>>
>> When working with a new design I use solid or stranded insulated wire with as close to the same diameter as the Litz I plan to use on the final winding to save $ so I've made quite a few measurements of distributed capacitance. What I've found is that with air core loops with 1/4" or more spacing the difference is negligible and with close wound rods it can vary from about 25-35% less with the Litz compared to enamel coated solid wire to 10% or so MORE with the Litz compared to some vinyl coated stranded wire with the same outer diameter as the Litz. Distributed capacitance will lower the Q and narrow the tuning range.
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>> Litz has a lower resistance because of what's called the Skin Effect. From just above audio to about 5MHz or so the RF current tends to concentrate on the outer layer of the conductor. Litz wire has more "surface" than solid, stranded wire acts like solid wire at RF if the strands aren't insulated from each other.
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>> I think one of the main reasons the FSLs have such good Q is the monster Litz has very low RF resistance and there's only about 40' of it as compared to 65-80' on an average MW air core loop. The large magnetic aperture probably accounts for the sharper nulls.
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>> I haven't seriously considered building an FSL since I have to get my loop antennas at

least 25' above ground to get away from the local RF racket from my neighbors. Remote tuned and rotating active loops are what I've been working on and the weight and wind resistance of a housing large enough for an FSL make it impractical.
>>
>> Tim Hills
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>> On 1/5/2013 23:24, John Popelish wrote:
>>>
>>> On 01/05/2013 09:15 PM, everettsharp@... wrote:
>>> > Hi John,
>>> >
>>> > It probably does not mean anything if you have enough space between the
>>> > turns, but when you have the windings next to each other, then distributed
>>> > capacitance does become a major factor. Litz wire does have less distributed
>>> > capacitance when the windings are butted up next to each other, then does
>>> > standard wire.
>>>
>>> I didn't know that. Is this a fact you have measured, or a
>>> claim you have read, somewhere? (I'm sceptical.)
>>>
>>> --
>>> Regards,
>>>
>>> John Popelish
>>
>>
>
>

9581. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-06 21:21:45 UTC
From: everettsharp@aol.com
Topic: 9541 Message: 9581

Hi Tim,

I can see that your projects are a lot more complex than mine, I try to keep mine simple and even at that they sometime get frustrating and more complex then I like. I wish I could put a antenna in my attic, but I screwed up when I had this house built by using foil covered sheeting my roof. I was for a energy conservation, it is suppose to reduce my heating cooling cost by 10 to 15%. At one time I thought about putting jumpers between the sheet and turning the whole roof into a antenna.

I have a article posted on this site with two 1 meter air-core loops that I made, both are wound with 330/46 Litz wire, one is for MW and the other is for LW. They are a hexagonal design and I made more like a good piece of furniture, using quarter sawn Red Oak that came out of a 200 year old tree. The Article is listed as The Hex Twins. They both work outstanding.

My project for the moment is another FSL, this one will be a 12" diameter and 7.5" wide, Tri-Coil Dual Band. Once finished I will dive into the Stacked Toroid, longer loop stick project. Right now I am try to get ready to go on a fly fishing trip to the Bahamas, I am leaving this next Saturday and still have a lot of flies to tie.

Everett

In a message dated 1/6/2013 1:30:28 P.M. Central Standard Time, thills@... writes:

Heya Everett.

I've been using varactors for tuning loops for over 20 years now. ;-) There's pics of a couple of loops that have now been recycled in the "LoopyLoops" folder in the group photo section.

Most of what I've been doing lately is with active ferrite loops using a regenerative winding with gain controlled amplifiers. I have a rotator that was from a marine ADF that I modified and it's in the attic over the garage with a 23" round loop and there's a tunable 8" rod mounted 25' up with the local "pest" in the null.

My latest project is an electronically "rotatable" antenna using 3 rods mounted 120* from each other with the varactor bank switched between them. The two inactive loops don't interact (much) with the active one when the coils are left open and a tuned active whip is phased against the active rod. I can get a very nice front or back facing cardioid and by increasing the gain on the whip from that point a cloverleaf null pattern of varying angles. Not a perfect solution but a compact and lightweight one. Using 8 inch rods in a triangle the whole thing fits in a 12" diameter by 1 1/2" enclosure

and weighs 3# or so.

I'm also using twin RG6, one carries the L.O. from a digital VFO and the first IF/mixer will also be built into the antenna housing at 10.7 MHz and fed down the other RG6. The vast majority of local noise is below 3MHz so upmixing at the antenna makes more sense technically and economically than trying to shield almost 100'. No point getting a good, clean signal just to have it swamped by garbage in the feed line. At night I have 5KW (1320) and 10KW (1140) stations beaming their night pattern into my back yard at 6 Miles each and a 400W-ND (1000) almost IN my back yard. Does make checking for intermod in my amps easy though.

The rods only have 16T of 100/44 Litz and the varactor bank is 2 sets of 26 parallel MVAM109s, about 6000pF at 1V and 380 pF at 9V. The windings are wound on a cardboard sleeve so I can move them for fine tuning. All can be tuned from 520 to 1750 KHz and have pretty narrow bandwidth (Q) without regen though I haven't taken any actual measurements yet. The whip uses a tapped torroid inductor and 8 more of the MVAM109s for tuning. The hand picked and matched varactors I'm using can be "pushed" to 10.5V so I can also cover the 160M band by overdriving the varactors.

The varactors were bought in a lot of 300, plus the 125 I already had and all were tested for capacitance at 5 voltages and for noise. If someone is using the surplus MVAM109s they should test them first. About 10% are noisy, another 10% or so have a poor 1V/9V capacitance ratio, low capactitance and poor V-C curves take out about 1/4 of them, leaving 50% pretty much unusable. About 30% of them are very quiet with a ~14:1 1V/9Vratio and perform well (noise) up to 11V, those are my preferred units and I'm using 60 of the 120 I have of them on this project

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Sioux Falls, SD

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The coils ate spaced .75",wound in same direction.
Connected parallel the inductance is 210uH with the 24" rod.
This results in a 0.55" spacing of coil over ferrite.

I tabulated the following data at 650kHz,
rod Q mv normalized
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multi-coils. You would not have much wind loading with something like this and you
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Everett

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distributed
> capacitance when the windings are butted up next to each other, then does
> standard wire.

I didn't know that. Is this a fact you have measured, or a claim you have read, somewhere? (I'm sceptical.)

--
Regards,

John Popelish

9582. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 00:22:16 UTC
From: ceo@andygardner.com
Topic: 9541 Message: 9582

On 7/01/2013, at 8:30 AM, Tim Hills wrote:

> I'm also using twin RG6, one carries the L.O. from a digital VFO and the first IF/mixer will also be built into the antenna housing at 10.7 MHz and fed down the other RG6. The vast majority of local noise is below 3MHz so upmixing at the antenna makes more sense technically and economically than trying to shield almost 100'. No point getting a good, clean signal just to have it swamped by garbage in the feed line.

Have you considered going to balanced feedline and using cat6 network cable instead?

>
> The rods only have 16T of 100/44 Litz and the varactor bank is 2 sets of 26 parallel MVAM109s, about 6000pF at 1V and 380 pF at 9V. The windings are wound on a cardboard sleeve so I can move them for fine tuning. All can be tuned from 520 to 1750 KHz and have pretty narrow bandwidth (Q) without regen though I haven't taken any actual measurements yet. The whip uses a tapped torroid inductor and 8 more of the MVAM109s for tuning. The hand picked and matched varactors I'm using can be "pushed" to 10.5V so I can also cover the 160M band by overdriving the varactors.
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I've been put off varactors by their poor Q. I'm going for the highest Q variable capacitor I can find, driven by an Arduino with a stepper motor shield attached. I was going to build a receiver to be driven by the Arduino as well, based on the Si4734 found in the Tecsun receivers (sparkfun have an Si4735 on a breakout board for $25) but I think in the short term, I'll just put my Drake R8B at the antenna end, and have the Arduino control that too, and command the Arduino from my computer using a USB DJ controller. The R8B gives the ability to use ECSS which is great for finding those weak carriers that you can sit on and wait to see if any audio appears out of the noise - can't do that with the Si4735 because it's AM/FM only.

> The varactors were bought in a lot of 300, plus the 125 I already had and all were tested for capacitance at 5 voltages and for noise. If someone is using the surplus MVAM109s they should test them first. About 10% are noisy, another 10% or so have a poor 1V/9V capacitance ratio, low capactitance and poor V-C curves take out about 1/4 of them, leaving 50% pretty much unusable. About 30% of them are very quiet with a ~14:1 1V/9Vratio and perform well (noise) up to 11V, those are my preferred units and I'm using 60 of the 120 I have of them on this project
>
Good information if I ever use Varactors. Thanks!

9583. Re: Loop Antenna Queries

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 01:02:26 UTC
From: Michelle
Topic: 9487 Message: 9583

Thanks for your help. However, we do not know how to connect the wires to the capacitor.. Does anyone know how to?

--- In loopantennas@...m, "Michelle" wrote:
>
> Hello, I am doing a project on loop antennas and we are currently trying to construct one ourselves. We are following instructions from this site http://www.iw5edi.com/ham-radio/?how-to-build-a-tuned-loop-antenna,118
>
> However, we substituted wood for PVC and our wires are the ones that comes in a pair and are encased in plastic. "Sound Physician Super OFC Silver Speaker Interconnect AWG-215.
>
> We do not know the capacitance of the tuning capacitor we should use as the ones in the site says to use "a tuning capacitor salvaged from an old radio" which we do not have. Also since we modified some of the variables of the ones in the site, do you think it would affect the antenna?
>
> Here are some pictures of the product now.
> http://tinyurl.com/cjdvowx
> http://tinyurl.com/cblz2s7
> http://tinyurl.com/bolywnj
>
> Thank you!
>

9584. Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 01:08:03 UTC
From: redsp
Topic: 9584 Message: 9584

Hi,

I'm making an all digital WWVB receiver with a goal of having the lowest power consumption possible. I am using an FPGA designed for very low power dissipation which has differential inputs I can use in a poor man's Delta Sigma ADC. I believe I can make it pretty sensitive with high processing gain to pull the signal out of the noise. Being on the east coast that will be important.

To minimize the power consumption I want to eliminate the RF amp. I have done a lot of research on the antenna and I think the shielded loop will give the largest signal without an amp.

After reading a number of web pages on loop antennas, a *very* large number of web pages, I decided to use a 2 foot diameter loop with 8 turns of RG-6 cable (solid copper core) as a reasonable compromise between ease of construction, size and effectiveness. This is 50 feet and I might add another 50 feet so I can use it without hacking the shield in the middle of the cable. I estimate a 2 foot loop with 50 foot of coax will give me a signal of approximately 30 uV from a 100 uV/m signal. To couple the antenna and receiver I am planning to use a ferrite loop with a number of turns of magnet wire as a transformer giving an even higher output voltage of 1 to 3 mV depending on how many turns I can get on the loop.

Any suggestions or thoughts?

Rick

9585. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 04:18:44 UTC
From: Tim Hills
Topic: 9541 Message: 9585

Once it's done and tweaked I'll post the schematics.

I've found that sometimes things that work fine on the bench fail miserably when put in service and things that shouldn't work at all sometimes do.

Tim Hills

On 1/6/2013 14:02, W2XJ wrote:
> Tim
>
> Can you post some schematics?
>
> Sent from my iPad
>
> On Jan 6, 2013, at 2:30 PM, Tim Hills <thills@...
> <mailto:thills@...>> wrote:
>
>

9586. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 04:54:20 UTC
From: W2XJ
Topic: 9541 Message: 9586

I also meant the regenerative loop which I understood to be working.

Sent from my iPad

On Jan 6, 2013, at 11:18 PM, Tim Hills <thills@...t> wrote:

> Once it's done and tweaked I'll post the schematics.
>
> I've found that sometimes things that work fine on the bench fail miserably when put in service and things that shouldn't work at all sometimes do.
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9587. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 06:09:46 UTC
From: Tim Hills
Topic: 9541 Message: 9587

On 1/6/2013 18:22, ceo@... wrote:
>
>
> On 7/01/2013, at 8:30 AM, Tim Hills wrote:
>
> > I'm also using twin RG6, one carries the L.O. from a digital VFO and
> the first IF/mixer will also be built into the antenna housing at 10.7
> MHz and fed down the other RG6. The vast majority of local noise is
> below 3MHz so upmixing at the antenna makes more sense technically and
> economically than trying to shield almost 100'. No point getting a
> good, clean signal just to have it swamped by garbage in the feed line.
>
> Have you considered going to balanced feedline and using cat6 network
> cable instead?
>
I've used CAT6 in the past at other locations but with the high RF environment here at night filtering out the common mode interference can be problematic even with my R71-A grounded directly to the street side of the Copper water line going to the main over 100' away. I've had excellent results using the twin RG6 as a balanced feedline with the shields grounded and I have a source to get it pretty cheap.

Since I wanted a dual conversion unit anyway putting the first mixer at the antenna wasn't much more of a problem. The best way to win a fight is to avoid it so by moving the operating frequency above the majority of the noise I don't have to deal with it in the transmission line. I also have crystal filters for 10.7 MHz with 8 and 17KHz bandwidths that will be in the antenna enclosure.
>
> >
> > The rods only have 16T of 100/44 Litz and the varactor bank is 2
> sets of 26 parallel MVAM109s, about 6000pF at 1V and 380 pF at 9V. The
> windings are wound on a cardboard sleeve so I can move them for fine
> tuning. All can be tuned from 520 to 1750 KHz and have pretty narrow
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> using can be "pushed" to 10.5V so I can also cover the 160M band by
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> (sparkfun have an Si4735 on a breakout board for $25) but I think in

> the short term, I'll just put my Drake R8B at the antenna end, and
> have the Arduino control that too, and command the Arduino from my
> computer using a USB DJ controller. The R8B gives the ability to use
> ECSS which is great for finding those weak carriers that you can sit
> on and wait to see if any audio appears out of the noise - can't do
> that with the Si4735 because it's AM/FM only.
>
I've found that the Q (and noise) of varactors varies a lot even in the same lot# of parts and depends a lot on the reverse current at the maximum rated voltage and the level on RF across them. That's why I'm using a low inductance and lots of varactors, fewer turns=lower RF levels and the low noise amps make up for the weak signal. Even the local pest only generates 50mV across the coil. Just an eyeball estimate using the scope and signal generator, -6dB points are about +/-6KHz at 950 KHz with a steep rolloff after that.

The worst loop I ever built was a square 4' LW loop with a single MVAM109. Everywhere I tuned I had signals, mostly intermod.:-[

The system is all analog with the exception of the VFO, an N3ZI DDS2 <http://www.pongrance.com/super-dds.html> and I am making heavy use of the BF904WR dual gate MOSFET that was designed for the cellphone industry but became obsolete almost as soon as it went into production. They take a steady hand to solder onto a circuit board but are very low noise and stable over the expected temperature range. The "receiver" end for now is my R71A tuned to 10.7MHz or a Soft66RF <http://zao.jp/radio/66RF/index_e.php> operating at the same frequency. Once the MW antenna is up and where I want it then I'll build the receiver end and probably incorporate the SDR module.

Everyone does things a bit differently and I'm building this system to do what I want it to do ;)

>
> > The varactors were bought in a lot of 300, plus the 125 I already
> had and all were tested for capacitance at 5 voltages and for noise.
> If someone is using the surplus MVAM109s they should test them first.
> About 10% are noisy, another 10% or so have a poor 1V/9V capacitance
> ratio, low capactitance and poor V-C curves take out about 1/4 of
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> those are my preferred units and I'm using 60 of the 120 I have of
> them on this project
> >
> Good information if I ever use Varactors. Thanks!
>
Your welcome.

I suppose someday I should get my notes together and write up what I've learned about using varactors. I'll retire in about 10 years or so ;)

Tim Hills
Sioux Falls, SD

9588. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 10:48:37 UTC
From: adibene
Topic: 9546 Message: 9588

--- In loopantennas@yahoogroups.com, toddroberts2001@... wrote:
>
> Hi Alberto,
> As I understand it the M0AYF preamp is very stable and many people
> have had good results building it on perfboard, groundplane, or
even
> design their own pc board for it. Nothing critical about the
layout.
> No shielding necessary.
>

Hi Todd,

thanks for this further comment. When I said that maybe a shielding would be needed, what I meant is shielding of the loop, not of the circuit itself.
Given that with a common emitter configuration the input impedance is much higher than with common base, maybe the loop can gather some common-mode potential from the electrical field, which is not almost short circuited to ground from the very low input impedance of the amplifier.

73 Alberto I2PHD

9589. loop feed point impedence

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 16:14:13 UTC
From: g3pgk
Topic: 9589 Message: 9589

Thanks for letting me into the group.
I wonder if anyone has measured the input Z to a 1 metre magnetic loop on 7mhz.
My measurments show it to be around 15 ohms can anyone support this finding
please or comment!
Colline G3PGK

9590. Re: [loopantennas] loop feed point impedence

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 21:58:58 UTC
From: Andrew Ikin
Topic: 9589 Message: 9590

Colline wrote on Jan 13.

Thanks for letting me into the group.
I wonder if anyone has measured the input Z to a 1 metre magnetic loop on 7mhz.
My measurments show it to be around 15 ohms can anyone support this finding
please or comment!
Colline G3PGK

Colline

I am measuring the following using an Array Solutions Antenna Analyser AM4170 with a 0.95m diam. loop made of 3/4 Aluminium tube.

Freq. 7.0MHz

The Equivalent circuit is:

Rs 6 Ohms
Xs 108 Ohms
Q 17.8

Lp 2.48uH

Kind regards

Andrew

Brecknockshire Wales

9591. Interesting old Naval Research Lab, powdered iron core loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-07 21:40:49 UTC
From: Naresh
Topic: 9591 Message: 9591

See conclusions at the end:

EFFECT OF IRON CORES ON THE PICKUP EFFICIENCY OF VLF LOOP ANTENNAS

http://www.dtic.mil/dtic/tr/fulltext/u2/a800155.pdf

9592. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-08 17:29:54 UTC
From: adibene
Topic: 9546 Message: 9592

--- In loopantennas@yahoogroups.com, Chris Trask wrote:

> The first stage needs to be very low input impedance, and Norton feedback amplifiers do not work well in that area. Very good for subsequent stages, though.
>
> Somewhere in the group files section I have a design for a 2-stage active loop amplifier, named WidebandLoopAntennaAmplifierRevA.pdf that shows how to make wideband low input impedance amplifiers.
>
> Chris
>

Chris,

thanks for your comments and your suggestion. Will have a look at that document, I am sure it is interesting.

From time to time is refreshing to temporarily switch from software to hardware... :-)

73 Alberto I2PHD

9593. Wideband small loop amp

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-09 00:47:03 UTC
From: n0sa@att.net
Topic: 9593 Message: 9593

I would like to build a small wideband loop antenna with an internal amplifier. I was wondering if anyone in the USA sells either a kit or a prebuilt high quality amp?
I can build the loop myself, no problem there, it is the amp that I need.
I have seen Chris Trask's circuits and that would be my second choice because I would have to get all the parts and build it from scratch.
Thanks
Larry
n0sa

9594. Re: Wideband small loop amp

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-09 19:06:08 UTC
From: Peter
Topic: 9593 Message: 9594

Hi Larry

The wideband receiving loop antenna I would recommend is the M0AYF design, see http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html

I built this design on stripboard and it really works very well. Before I had this loop 160,80 & 40 were so full of noise I despaired, but with this little antenna in place, these bands are once again just as good as they were when I first started out in amateur radio over 45 years ago, free from plasma TVs, switch mode PSUs etc. The parts are very easy to get hold of, nothing exotic. The hardest part is providing a waterproof housing.

Of course if you have the funds, then a Wellbrook amplifier, eg http://www.wellbrook.uk.com/antennashop/index.php?route=product/product&product_id=40 should also do the trick, but at a price !!

73

Peter

--- In loopantennas@yahoogroups.com, "n0sa@..." wrote:
>
> I would like to build a small wideband loop antenna with an internal amplifier. I was wondering if anyone in the USA sells either a kit or a prebuilt high quality amp?
> I can build the loop myself, no problem there, it is the amp that I need.
> I have seen Chris Trask's circuits and that would be my second choice because I would have to get all the parts and build it from scratch.
> Thanks
> Larry
> n0sa
>

9595. Re: [loopantennas] Interesting old Naval Research Lab, powdered iron core loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-11 01:43:42 UTC
From: John Popelish
Topic: 9591 Message: 9595

On 01/07/2013 04:40 PM, Naresh wrote:
> See conclusions at the end:
>
> EFFECT OF IRON CORES ON THE PICKUP EFFICIENCY OF VLF LOOP ANTENNAS
>
> http://www.dtic.mil/dtic/tr/fulltext/u2/a800155.pdf

Thank you for linking to this. I am especially interested
in the field distortion effect of a high permeability core
or an EM field. I have been pondering this for a long time,
and had visualized the effect just about the way they show it.

--
Regards,

John Popelish

9596. Re: [loopantennas] Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-11 01:47:45 UTC
From: John Popelish
Topic: 9584 Message: 9596

On 01/06/2013 08:08 PM, redsp wrote:
(snip)
> To couple the antenna and receiver I am planning to use a
> ferrite loop with a number of turns of magnet wire as a
> transformer giving an even higher output voltage of 1 to
> 3 mV depending on how many turns I can get on the loop.
>
> Any suggestions or thoughts?

I suggest you use a pair of ferrite beads, side by side, as the core for the output matching transformer. Any low frequency ferrite shield bead. I think the next better form is a single high permeability ferrite toroid.

It will be smaller, lower loss and not pick up any other signals from the environment that get added to the received signal.

--
Regards,

John Popelish

9597. Re: [loopantennas] fs loop article

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-11 03:24:59 UTC
From: John Popelish
Topic: 9541 Message: 9597

On 01/06/2013 01:08 PM, everettsharp@... wrote:
> jpopelish@... writes:
>> (mailto:everettsharp@...) wrote:

>>> Litz wire reduces the impact of the skin effect and
>>> the proximity effect. So for a piratical explanation
>>> I have just wound a 18 turn coil with standard solid
>>> 18 gage wire, close wound, on a 7.5" FSL and I find
>>> the tuning range (using a 10 to 381 pf variable
>>> capacitor) is 1200 to 400 KHz. Now I rewind a 18 turn
>>> coil, close wound, on the same 7.5" FSL using 660/46
>>> Litz wire, and I now find the tuning range is 1850
>>> to 405 KHz. So my question to you is if it is not
>>> higher distributed capacitance using the solid wire
>>> over that of the Litz wire, then what is it that is
>>> causing the frequency, at the high end of the band
>>> to be lower and having less tuning range? This is
>>> not theory, this is what I see from a piratical stand
>>> point. I am sure that if you want the theory behind
>>> it you can find it somewhere here on the web. (I am
>>> not skeptical, I am a believer)
(snip)
>
>> One more question. Was the length (across the turns)
>> of the 18 turn Litz coil the same as the length of the
>> 18 turn solid wire coil? In other words, was the 18
>> gauge solid wire the same width as the (as wound) Litz
>> wire?

> I don't know what the length was of the two wires, as I
> did not measure them. However, the cross section area
> of 660/46 Litz wire is nearly the same as solid 18 gage
> wire.

Here is what I am thinking about, with regard to comparing
Litz to solid (or any other two choices of winding conductor.

As long as the resonant Q of a the inductance of a loop and
with its own stray capacitance and a tuning capacitor allows
some actual math solutions, if two tuning cap values and two
resonant frequencies are available from an experiment, it
should be possible to calculate the actual coil inductance
and effective, parallel, stray capacitance. The additional
requirement is that, either the resonant Q is about 10 or
higher, so the losses do not appreciably affect the resonant
frequencies, or the effective losses must be calculable for

the for the loop at the two resonant frequencies.

The point being, that with a given coil, and two resonant frequencies, with two values of tuning capacitance, it should be possible to calculate the loop inductance and loop stray capacitance, by solving a pair of simultaneous equations for each coil.

So, it should be possible with these two resonant frequencies, per coil, with two values of tuning capacitance, we should be able actually solve for any coil's actual inductance and stray capacitance.

This technique should be handy to compare any two different construction choices (diameter, turn spacing, conductor strands, wire insulation, form material, etc.) to work toward an optimum (widest tuning range per dollar, highest Q per dollar, or whatever figure of merit you choose) design for any available coil conductor material and construction technique.

This solution rapidly takes coil design optimization out of the opinion phase and moves it into experimental science.

--
Regards,

John Popelish

9598. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-12 18:59:50 UTC
From: redsp
Topic: 9584 Message: 9598

```
--- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> On 01/06/2013 08:08 PM, redsp wrote:
> (snip)
> > To couple the antenna and receiver I am planning to use a
> > ferrite loop with a number of turns of magnet wire as a
> > transformer giving an even higher output voltage of 1 to
> > 3 mV depending on how many turns I can get on the loop.
> >
> > Any suggestions or thoughts?
>
> I suggest you use a pair of ferrite beads, side by side, as
> the core for the output matching transformer. Any low
> frequency ferrite shield bead. I think the next better form
> is a single high permeability ferrite toroid.
>
> It will be smaller, lower loss and not pick up any other
> signals from the environment that get added to the received
> signal.
```

Hi John,

Which do you mean by "it", the torroid?

Rick

9599. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-12 21:42:24 UTC
From: John Popelish
Topic: 9584 Message: 9599

On 01/12/2013 01:59 PM, redsp wrote:
> --- In loopantennas@yahoogroups.com, John Popelish wrote:

>> I suggest you use a pair of ferrite beads, side by side, as
>> the core for the output matching transformer. Any low
>> frequency ferrite shield bead. I think the next better form
>> is a single high permeability ferrite toroid.
>>
>> It will be smaller, lower loss and not pick up any other
>> signals from the environment that get added to the received
>> signal.
>
> Hi John,
>
> Which do you mean by "it", the torroid?

I mean either of these closed magnetic path transformers
will be smaller, lower loss and not pick up any other
signal, compared to a rod form (open magnetic path) of
transformer.

--
Regards,

John Popelish

9600. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-12 22:51:01 UTC
From: lz1aq
Topic: 9546 Message: 9600

Hello Alberto,

1. You should have to use balanced design. It will increase the IP2 with 20 -30 dBm which is substantial difference. In these wideband designs 2nd order IMD are much more important than 3d order and they appear at lower levels of the input signal. Doubling your design as balanced will immediately improve IP2 and probably you will be satisfied. Assume also IMD from nearby FM stations.
2. The 1st stage transistors must have FT >200 MHz if you work up to 30 MHz. Since the circuit is common base, lower Ft can be used. PN2222A has very good noise figure and you will have no problems as a first stage up to 50MHz. I do not know whether low VHF noise automatically means low noise in HF or LF. So you can test different transistors (not in spice but by experiment) but do not expect substantial improvements!. The common emitter stages should have higher Ft and there you can use VHF transistors. I agree with Jack K8ZOA that you can get the best DC op. point from data sheet in order to minimize the IMD. In any case most of the IMD is comming from the last stages. You can look in my design
http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.\
htm
<http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna\
.htm> as a simplest reference point and to have an idea what I am speaking about.
3. The input resistance of the amplifier is important as far as you need wideband design. Thus the loop is working in almost short circuit mode and the loop current does not depend from the frequency. If you do not mind very wideband design, you can work successfully with higher input impedance amplifier and you might have improvement in loop amplifier noise floor. Probably you will not need shielded loop up to 100 ohms input impedance. Moreover in balanced design this adverse effect is attenuated additionally.
4. In your spice model you can change the loop model with Norton equivalent circuit with current source. This has the advantage to be frequency independent and make the analysis more convenient. Otherwise to get frequency response of your amplifier in spice you should have to involve frequency dependant voltage source (voltage must increase linearly with frequency)
5. If you planning to listen LF you must avoid many transformers (as you do). They are wonderful in order to reach good CM rejection and low noise - but very low frequency response is difficult to be reached (or I can not reach : - (. In any case use ferrite cores with u>10000 and you probably can go down to 50 KHz preserving 20-30 MHz upper frequency. But the best way for LF is not to use any transformers.

6. Defining voltage gain in these amplifiers is not suitable.
Define in spice: GAIN = V_out/I_loop to get the curve of antenna
factor. The gain of these trans-resistance (or transconductance?)
amplifiers must be 700- 800 V/A (or Ohms). With this gain and 1 sq.m
single turn loop you will have antenna factor around 0 dB /m which
means 1 uV/m field will give 1 uV output voltage. Assume loop
inductance between 2 to 5 uH for single turn loop and current
source of 0.7 to 2 nA (for 1 uV/m field intensity) and you will
get the output voltage directly in uV. I roughly estimate that your
amplifier gain is somewhere in this region. In any case the
minimal gain should be determined mostly from the noise floor of
your RX. The output amplifier noise without antenna should be at least
several dB higher than the RX noise floor. Connecting the amplifier
to RX (without antenna) should increase the RX output audio noise.
7. Be aware that when the common base amplifier is working with
very low resistance of the source, the noise figure is
degraded substantially. So in very low frequencies, where the loop
impedance becomes very low the output noise increases. Probably you
should have to use loops with larger inductance (larger size or even
with several turns which is not very good from other point of view)
but this has to be tested. My own experiments show that for
LF it is easier to built electric rather than magnetic wideband
antenna. But there are other problems with electric antenna e.g. lack of
directivity and increased conducted noise ..... so there is no free
lunch!

And at the end: thank you very much for your wonderful Winrad.

73 Chavdar LZ1AQ

lz1aq@... <mailto:lz1aq@...> www.lz1aq.signacor.com
<http://www.lz1aq.signacor.com/>

9601. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-13 15:32:11 UTC
From: redsp
Topic: 9584 Message: 9601

```
--- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> On 01/12/2013 01:59 PM, redsp wrote:
> > --- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> >> I suggest you use a pair of ferrite beads, side by side, as
> >> the core for the output matching transformer. Any low
> >> frequency ferrite shield bead. I think the next better form
> >> is a single high permeability ferrite toroid.
> >>
> >> It will be smaller, lower loss and not pick up any other
> >> signals from the environment that get added to the received
> >> signal.
> >
> > Hi John,
> >
> > Which do you mean by "it", the toroid?
>
> I mean either of these closed magnetic path transformers
> will be smaller, lower loss and not pick up any other
> signal, compared to a rod form (open magnetic path) of
> transformer.
```

Ok, thanks. I'll probably go with the single toroid because I want to get 100 turns or so on the secondary to give me a larger output signal. Might be a little harder with two cores. What mu number would be "high"?

I'll likely get one from a broken PC power supply... if I can find a broken PC power supply. All the PCs I've scrounged from the trash lately have been working when I hooked them up, so I'm still looking.

One of the many loop antenna pages I visited, and the only one that used a core for coupling, used a toroid from an old PC power supply. He had a ton of them and used a bunch of the voltage switches for a power of 2 cap bank to tune the antenna. Very nicely done.

Rick

9602. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-13 17:28:04 UTC
From: John Popelish
Topic: 9584 Message: 9602

On 01/13/2013 10:32 AM, redsp wrote:

> Ok, thanks. I'll probably go with the single toroid
> because I want to get 100 turns or so on the secondary to
> give me a larger output signal. Might be a little harder
> with two cores. What mu number would be "high"?

Any ferrite that has a measurable resistance when touched with the points of ohm meter leads will probably have usefully high permeability at 60 kHz. If you have several cores to choose from, lower resistance generally indicates higher permeability. The stuff made for megahertz signals almost always shows an unmeasurably high resistance.

> I'll likely get one from a broken PC power supply... if I
> can find a broken PC power supply. All the PCs I've
> scrounged from the trash lately have been working when I
> hooked them up, so I'm still looking.

Yes, power ferrites are pretty good transformer material for 60 kHz signal use. But many of these are not ferrite, but powdered iron, low permeability, energy storage cores. Those are almost always painted with bright colors, as a material code. Some ferrite is also painted for insulation purposes, but not usually. You can nick the paint with a file for the resistance test. Ferrite is also black and glassy hard, while the powdered iron material is usually light grey and soft enough to nick with a file.

> One of the many loop antenna pages I visited, and the
> only one that used a core for coupling, used a toroid
> from an old PC power supply. He had a ton of them and
> used a bunch of the voltage switches for a power of 2 cap
> bank to tune the antenna. Very nicely done.

Cup cores (pot cores) and other two piece transformer types are very handy for comparative experiments, because the coil is wound on a bobbin (that can be swapped out). You just have to find core pairs that do not have a gap between the center pegs (which lowers the effective permeability).

I have a pretty good collection of such things, so if you contact me by email, I may be able to send you a little kit of parts to play with.

--
Regards,

John Popelish

9603. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-13 17:45:33 UTC
From: redsp
Topic: 9584 Message: 9603

--- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> On 01/13/2013 10:32 AM, redsp wrote:
>
> > Ok, thanks. I'll probably go with the single toroid
> > because I want to get 100 turns or so on the secondary to
> > give me a larger output signal. Might be a little harder
> > with two cores. What mu number would be "high"?
>
> Any ferrite that has a measurable resistance when touched
> with the points of ohm meter leads will probably have
> usefully high permeability at 60 kHz. If you have several
> cores to choose from, lower resistance generally indicates
> higher permeability. The stuff made for megahertz signals
> almost always shows an unmeasurably high resistance.

Sounds like useful info. This is stuff I should know about, but have never worked with.

> > I'll likely get one from a broken PC power supply... if I
> > can find a broken PC power supply. All the PCs I've
> > scrounged from the trash lately have been working when I
> > hooked them up, so I'm still looking.
>
> Yes, power ferrites are pretty good transformer material for
> 60 kHz signal use. But many of these are not ferrite, but
> powdered iron, low permeability, energy storage cores.
> Those are almost always painted with bright colors, as a
> material code. Some ferrite is also painted for insulation
> purposes, but not usually. You can nick the paint with a
> file for the resistance test. Ferrite is also black and
> glassy hard, while the powdered iron material is usually
> light grey and soft enough to nick with a file.

More important info.

> > One of the many loop antenna pages I visited, and the
> > only one that used a core for coupling, used a toroid
> > from an old PC power supply. He had a ton of them and
> > used a bunch of the voltage switches for a power of 2 cap
> > bank to tune the antenna. Very nicely done.
>
> Cup cores (pot cores) and other two piece transformer types
> are very handy for comparative experiments, because the coil
> is wound on a bobbin (that can be swapped out). You just
> have to find core pairs that do not have a gap between the
> center pegs (which lowers the effective permeability).

>
> I have a pretty good collection of such things, so if you
> contact me by email, I may be able to send you a little kit
> of parts to play with.

Actually, after I sent my last reply I was doing a search for a toroid core and found an interesting video on toroidal core winding. I couldn't quite see how the machine worked in the video, so I'll watch it again full screen to see if I can pick up some details.

While watching the video, I realized that this is pretty much the same as a current transformer. After doing a search on Digikey I found a number of secondary coils that should do the job. But then magnetics are not my strong suit. Certainly it is a lot easier to buy one of these for $3 plus shipping than winding my own core. Do you think this would be a useful transformer for a 60 kHz antenna?

http://www.digikey.com/product-detail/en/PE-51688NL/553-1546-ND/2265978

Or should I find a good core and wind it myself? My goal is to get the highest output voltage so I think I just need to use as many windings on the coil as practical. It will be driving a very high impedance input, not a coax.

Rick

9604. ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-13 21:17:35 UTC
From: dannibou
Topic: 9604 Message: 9604

Hi to members of this group. I know it's a bit off topic but it is related to antenna and preamp circuits. I own several ferrite rings that I could use to build antenna preamp but the problem is that I don't know what it's their permeability. I know that it's important in some circuit and I wonder if it exist a way to know the caracteristics of them. I would like to classify them separately for future project. Any ideas? Sorry if my english is not as good as I would have liked.
Thanks
Danny

9605. Re: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-13 21:41:13 UTC
From: redsp
Topic: 9604 Message: 9605

--- In loopantennas@yahoogroups.com, "dannibou" wrote:
>
> Hi to members of this group. I know it's a bit off topic but it is related to antenna and preamp circuits. I own several ferrite rings that I could use to build antenna preamp but the problem is that I don't know what it's their permeability. I know that it's important in some circuit and I wonder if it exist a way to know the caracteristics of them. I would like to classify them separately for future project. Any ideas? Sorry if my english is not as good as I would have liked.
> Thanks
> Danny

Check out the post by John Popelish earlier today. He gives some good advice on identifying high and low mu cores.

Rick

9606. Re: [loopantennas] ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-13 22:35:26 UTC
From: John Popelish
Topic: 9604 Message: 9606

On 01/13/2013 04:17 PM, dannibou wrote:
> Hi to members of this group. I know it's a bit off topic
> but it is related to antenna and preamp circuits. I own
> several ferrite rings that I could use to build antenna
> preamp but the problem is that I don't know what it's
> their permeability. I know that it's important in some
> circuit and I wonder if it exist a way to know the
> caracteristics of them. I would like to classify them
> separately for future project. Any ideas? Sorry if my
> english is not as good as I would have liked.

There are two basic core material categories. The powdered iron group (actually iron or one of several high permeability alloys, like Sendust or moly Permalloy) or ferrite (a solid ceramic material that has low conductivity compared to metals and high permeability, compared to most ceramics).

http://www.mag-inc.com/products/powder-cores

The powdered cores are often used in power supplies, for circuits that need energy storage inductors, like DC filters or flyback transformers (where energy is first stored in the core and then released into the output). These cores are often painted in solid colors, often with one side a second color, to encode their material and permeability.

Unfortunately, there is no universal code used by all manufacturers, so knowing the color, without knowing the manufacturer only narrows the possibilities. Measuring the inductance of a test winding is often needed to be sure of the permeability. An inductance meter or bridge is very helpful for this work.

These cores are made of metal powder clued together with a filler and binding material and are usually light grey color (for the higher permeability, mostly metal ones)to tan (for the mostly filler, low permeability ones), under the paint.

http://www.micrometals.com/materials_index.html
http://www.qrz.lt/ly1gp/amidon.html
http://www.rfcafe.com/references/electrical/toroid.htm

Ferrite comes in two common flavors. Nickle zinc ferrite (NiZn) is used for most high frequency applications. It has medium permeability (tens to hundreds), very high resistivity (usually measures off scale high, if touched

with ohm meter probes) and has less flux capability than the lower frequency materials. The lower frequency and power materials are mostly Magnesium zinc ferrite (MnZn), and generally have permeability ranging from hundreds to tens of thousands. They are also a lot more conductive, with conductivity generally lower, the higher the permeability. You may get an ohm reading of thousands to hundreds of ohms if you touch them with ohm meter probes.

All ferrites are black to dark grey and break like glass. They can be used for transformers in ungapped forms, including two piece parts that have polished mating surfaces, or for energy storage and linear inductors, if a gap is made between mating halves in the magnetic path.

http://www.fair-rite.com/newfair/materials.htm

--
Regards,

John Popelish

9607. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-13 22:46:54 UTC
From: John Popelish
Topic: 9584 Message: 9607

On 01/13/2013 12:45 PM, redsp wrote:

> Actually, after I sent my last reply I was doing a
> search for a toroid core and found an interesting video
> on toroidal core winding. I couldn't quite see how the
> machine worked in the video, so I'll watch it again full
> screen to see if I can pick up some details.

When I wind toroid cores, I find a wooden dowel much smaller than the hole in the core, usually a foot or a little more, long. I notch both ends and wind the wire between these notches, to make a supply of wire I can easily pass through the core. This long bobbin makes it a lot easier to pass a supply of wire, multiple times through the hole in a toroid.

> While watching the video, I realized that this is pretty
> much the same as a current transformer.

Exactly the same.

> After doing a search on Digikey I found a number of
> secondary coils that should do the job. But then
> magnetics are not my strong suit. Certainly it is a lot
> easier to buy one of these for $3 plus shipping than
> winding my own core. Do you think this would be a useful
> transformer for a 60 kHz antenna?

Most current transformers are made with metallic ribbon cores that are optimized for line frequencies, though some are made of ferrite for switching power supply CT applications. The ferrite ones might well serve for the secondary of a 60kHz transformer.

> http://www.digikey.com/product-detail/en/PE-51688NL/553-1546-ND/2265978

That one is certainly made for your frequency range.

> Or should I find a good core and wind it myself? My
> goal is to get the highest output voltage so I think I
> just need to use as many windings on the coil as
> practical. It will be driving a very high impedance
> input, not a coax.

I think that CT might be a good place to start some experiments. But keep in mind that your pickup coil is not a zero ohm voltage source, but has some impedance. That impedance will limit how high you can jack up the voltage

with a transformer, before the transformer starts to load down the voltage from the coil. But you might push it a bit higher by resonating both the coil and transformer with capacitors (reduce their usable bandwidth, but peak the response around the desired frequency).

Do you have an oscilloscope or other means to measure the signal you are working with? I made a field generating coil, to produce a stronger drive signal than WWVB, for such experiments, so I had enough signal to make accurate, comparative measurements.

--
Regards,

John Popelish

9608. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-14 16:24:47 UTC
From: Alberto I2PHD
Topic: 9546 Message: 9608

On 1/13/2013 5:35 PM, loopantennas@yahoogroups.com wrote:

> /Hello Alberto,
>
> 1. You should have to use balanced design.
> It will increase the IP2 with 20 -30 dBm which is substantial difference.
> In these wideband designs 2nd order IMD are much more important than 3d
> order and they appear at lower levels of the input signal.
> Doubling your design as balanced will immediately improve IP2 and probably
> you will be satisfied./
>
> <<< snip >>>

Hi Chavdar,

many thanks indeed for all of your suggestions, which make a lot of sense.
Yes, I have decided that, whatever the final form of my preamplifier will be, it will use a balanced design, like your schematic, which I was already aware of.

There is one thing I am just considering... given that there are new MMIC amplifier on the market which exhibit strong resistance to intermodulation and low noise, I am thinking that maybe a couple of them, in a balanced configuration, could work rather well.... for example, I saw the specs of the GALI-7+ which look very interesting ...

https://dl.dropbox.com/u/15089947/Gali7.png

Features :

? InGaP HBT IF and RF amplifier
? frequency range, DC to 1 GHz, usable to 4 GHz
? high gain, 25.1 dB typ. at 100 MHz
? up to +19.2 dBm typ. output power at 100 MHz
? high IP3, +38 dBm at 100 MHz
? low noise figure, 2.7 dB typ.
? unconditionally stable
? low thermal resistance
? transient protected
? low cost $1.85 (qty. 1000)
? protected by US patent, 6,943,629

Note the +38 dBm IP3 and the noise figure, 2.7 dB

Are there substantial reasons why not to use a couple of such devices for a preamplifier ?
I have no experiences in the use of such components, so I am asking here those who maybe have already used it to know if there are hidden drawbacks...

And glad that you like Winrad !

TNX

--
/*73 Alberto I2PHD

*/

9609. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-14 16:59:16 UTC
From: redsp
Topic: 9584 Message: 9609

--- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> When I wind toroid cores, I find a wooden dowel much smaller
> than the hole in the core, usually a foot or a little more,
> long. I notch both ends and wind the wire between these
> notches, to make a supply of wire I can easily pass through
> the core. This long bobbin makes it a lot easier to pass a
> supply of wire, multiple times through the hole in a toroid.

Thanks for the tip.

> Most current transformers are made with metallic ribbon
> cores that are optimized for line frequencies, though some
> are made of ferrite for switching power supply CT
> applications. The ferrite ones might well serve for the
> secondary of a 60kHz transformer.

Looking at the shape I realize these transformers may just be coils rather than toroids. Will that make a difference?

> > http://www.digikey.com/product-detail/en/PE-51688NL/553-1546-ND/2265978
>
> That one is certainly made for your frequency range.
>
> I think that CT might be a good place to start some
> experiments. But keep in mind that your pickup coil is not
> a zero ohm voltage source, but has some impedance. That
> impedance will limit how high you can jack up the voltage
> with a transformer, before the transformer starts to load
> down the voltage from the coil. But you might push it a bit
> higher by resonating both the coil and transformer with
> capacitors (reduce their usable bandwidth, but peak the
> response around the desired frequency).
>
> Do you have an oscilloscope or other means to measure the
> signal you are working with? I made a field generating
> coil, to produce a stronger drive signal than WWVB, for such
> experiments, so I had enough signal to make accurate,
> comparative measurements.

Yes, I have an oscope and a signal generator that can make a 60 kHz sine wave. I will be testing the antenna shortly. There are a lot of facets to this project and I tend to bounce around between them rather than work solely on one part at a time.

The load (receiver input) will be very high impedance (megohms), so I can't imagine a 10 ohm coil resistance will matter much. I will look into tuning the transformer output as

well as the antenna coil. Thanks.

Rick

9610. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-14 17:19:14 UTC
From: John Popelish
Topic: 9584 Message: 9610

On 01/14/2013 11:59 AM, redsp wrote:
>
>
> --- In loopantennas@yahoogroups.com, John Popelish
> wrote:

> Looking at the shape I realize these transformers may
> just be coils rather than toroids. Will that make a
> difference?

No, I think the one you linked to, below, has a high
permeability, ferrite, toroid core. Without a core, it
would have an extremely low output.

(snip)
>> Do you have an oscilloscope or other means to measure
>> the signal you are working with? I made a field
>> generating coil, to produce a stronger drive signal
>> than WWVB, for such experiments, so I had enough signal
>> to make accurate, comparative measurements.
>
> Yes, I have an oscope and a signal generator that can
> make a 60 kHz sine wave. I will be testing the antenna
> shortly. There are a lot of facets to this project and I
> tend to bounce around between them rather than work
> solely on one part at a time.
>
> The load (receiver input) will be very high impedance
> (megohms), so I can't imagine a 10 ohm coil resistance
> will matter much. I will look into tuning the
> transformer output as well as the antenna coil. Thanks.

It ,may be megohms at DC, but there is also stray
capacitance across that 200 turn secondary (most of it,
inside the CT, itself. If you use a single turn primary to
get the full 200X voltage multiplication, that capacitance
looks 200^2=40,000 times larger, across that one turn
primary. So several primary turns may be a more optimal
load for the loop. Experiment will tell, especially if you
sweep frequencies near 60kHz. You may be able to peak the
response almost just by selecting the right number of
primary turns, leaving only a little need for additional
resonating capacitor.

--
Regards,

John Popelish

9611. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-14 17:43:29 UTC
From: John Popelish
Topic: 9584 Message: 9611

On 01/14/2013 11:59 AM, redsp wrote:
(snip)
> The load (receiver input) will be very high impedance
> (megohms), so I can't imagine a 10 ohm coil resistance
> will matter much. I will look into tuning the
> transformer output as well as the antenna coil.

Don't forget that that 1:200 transformer will also reflect a
1 megohm amplifier input impedance down to 25 ohms across
the primary.

--
Regards,

John Popelish

9612. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-14 17:51:48 UTC
From: redsp
Topic: 9584 Message: 9612

```
--- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> On 01/14/2013 11:59 AM, redsp wrote:
> (snip)
> > The load (receiver input) will be very high impedance
> > (megohms), so I can't imagine a 10 ohm coil resistance
> > will matter much. I will look into tuning the
> > transformer output as well as the antenna coil.
>
> Don't forget that that 1:200 transformer will also reflect a
> 1 megohm amplifier input impedance down to 25 ohms across
> the primary.
```

Are you sure the reflected image of the resistance and capacitance will be proportional to the coil ratio squared and not just the coil ratio? I see I need to dig into this a bit more.

Rick

9613. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-14 18:08:21 UTC
From: John Popelish
Topic: 9584 Message: 9613

On 01/14/2013 12:51 PM, redsp wrote:

> Are you sure the reflected image of the resistance and
> capacitance will be proportional to the coil ratio
> squared and not just the coil ratio? I see I need to dig
> into this a bit more.

Quite.

Voltage changes by turns ratio and current by inverse turns ratio. But impedance is the ratio of voltage divided by current, so the turns ratio comes into the impedance ratio, twice (second power).

--
Regards,

John Popelish

9614. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-15 08:25:27 UTC
From: lz1aq
Topic: 9546 Message: 9614

> Hi Chavdar,
>
> many thanks indeed for all of your suggestions, which make a lot of sense.
> Yes, I have decided that, whatever the final form of my preamplifier will be, it will
> use a balanced design, like your schematic, which I was already aware of.
>
> There is one thing I am just considering... given that there are new MMIC amplifier
> on the market which exhibit strong resistance to intermodulation and low noise,
> I am thinking that maybe a couple of them, in a balanced configuration, could
> work rather well.... for example, I saw the specs of the GALI-7+ which look very

>
> Features :
>
> ☐ InGaP HBT IF and RF amplifier
> ☐ frequency range, DC to 1 GHz, usable to 4 GHz
> ☐ high gain, 25.1 dB typ. at 100 MHz
> ☐ up to +19.2 dBm typ. output power at 100 MHz
> ☐ high IP3, +38 dBm at 100 MHz
> ☐ low noise figure, 2.7 dB typ.
> ☐ unconditionally stable
> ☐ low thermal resistance
> ☐ transient protected
> ☐ low cost $1.85 (qty. 1000)
> ☐ protected by US patent, 6,943,629
>
> Note the +38 dBm IP3 and the noise figure, 2.7 dB
>
> Are there substantial reasons why not to use a couple of such devices for a preamplifier ?
> I have no experiences in the use of such components, so I am asking here those who
> maybe have already used it to know if there are hidden drawbacks...
>

Hello Alberto,
There are no substantial reasons not to use a couple of such devices; especially in this case probably you can use them as a final amplifier. The loop amplifier is not a very standard case so with ready made modules sometimes you can not reach easily the desired parameters. The benefit of using modules is that they save you design time (no spice modeling etc.). But there are no rules and every design is a compromise between controversy requirements: parameters, price, availability, and not the last the designer's preferences which sometimes are not very logical. There is also conservatism and probably we should more often look at the new data sheets of the chip producers.
Chavdar LZ1AQ

9615. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-15 19:01:13 UTC
From: vbifyz
Topic: 9546 Message: 9615

Hi Alberto,

Most of the preamp modules are designed for 50 Ohm matched input.
This is not optimal for the loop.
There are designs published that use high speed opamp in an inverting configuration, which is supposed to give a very low input impedance and avoid using discrete transistors. I attempted to build such amplifier and had difficulties to keep it stable.
My impression is that Chris' and Chavdar's designs that use discrete transistors are the way to go. Chris' "secret sauce" is transformers, which require more build efforts but seem to improve the parameters.

73, Mike VE3YXA

--- In loopantennas@yahoogroups.com, Alberto I2PHD wrote:

> Hi Chavdar,
>
> many thanks indeed for all of your suggestions, which make a lot of sense.
> Yes, I have decided that, whatever the final form of my preamplifier will be, it will
> use a balanced design, like your schematic, which I was already aware of.
>
> There is one thing I am just considering... given that there are new MMIC amplifier
> on the market which exhibit strong resistance to intermodulation and low noise,
> I am thinking that maybe a couple of them, in a balanced configuration, could
> work rather well.... for example, I saw the specs of the GALI-7+ which look very
> interesting ...

9616. Re: [loopantennas] Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-16 00:04:30 UTC
From: ceo@andygardner.com
Topic: 9546 Message: 9616

What are peoples feelings on the front end of this circuit?

http://users.tpg.com.au/users/ldbutler/ActiveLoopConverter.htm

I want q-multiplier ability. The best loop I ever built had a FET q-multiplier attached to the tuned circuit, but the feed to the receiver came from a smaller single turn, closer to the centre of the loop (Q Multiplier and Spiral Loop Antenna - Maynard - Practical Wireless March 1981). I am considering using NE5534's in a balanced configuration.

Discuss.

On 16/01/2013, at 8:01 AM, vbifyz wrote:

>
> Hi Alberto,
>
> Most of the preamp modules are designed for 50 Ohm matched input.
> This is not optimal for the loop.
> There are designs published that use high speed opamp in an inverting configuration, which is supposed to give a very low input impedance and avoid using discrete transistors. I attempted to build such amplifier and had difficulties to keep it stable.
> My impression is that Chris' and Chavdar's designs that use discrete transistors are the way to go. Chris' "secret sauce" is transformers, which require more build efforts but seem to improve the parameters.

9617. Re: [loopantennas] Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-17 00:24:51 UTC
From: Jack Smith
Topic: 9546 Message: 9617

In general, the noise figure of even the best op amp is nothing to brag about compared with a properly designed discrete transistor design with noiseless feedback.

Some of that concern goes away when using a tuned loop with, in effect, a step up transformer via the coupling loop. The transformer, in effect, provides "noise free" voltage gain that must be factored into the composite noise figure equation.

The referenced circuit with op-amp front end is probably fine for the frequency band in question, < 500 KHz where atmospheric noise is predominant.

Jack K8ZOA

On 1/15/2013 7:04 PM, ceo@... wrote:
>
>
> What are peoples feelings on the front end of this circuit?
>
> http://users.tpg.com.au/users/ldbutler/ActiveLoopConverter.htm
>
> I want q-multiplier ability. The best loop I ever built had a FET
> q-multiplier attached to the tuned circuit, but the feed to the
> receiver came from a smaller single turn, closer to the centre of the
> loop (Q Multiplier and Spiral Loop Antenna - Maynard - Practical
> Wireless March 1981). I am considering using NE5534's in a balanced
> configuration.
>
> Discuss.
>
> On 16/01/2013, at 8:01 AM, vbifyz wrote:
>
> >
> > Hi Alberto,
> >
> > Most of the preamp modules are designed for 50 Ohm matched input.
> > This is not optimal for the loop.
> > There are designs published that use high speed opamp in an
> inverting configuration, which is supposed to give a very low input
> impedance and avoid using discrete transistors. I attempted to build
> such amplifier and had difficulties to keep it stable.
> > My impression is that Chris' and Chavdar's designs that use discrete
> transistors are the way to go. Chris' "secret sauce" is transformers,
> which require more build efforts but seem to improve the parameters.
>

>

9618. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-16 22:16:02 UTC
From: redsp
Topic: 9584 Message: 9618

--- In loopantennas@yahoogroups.com, John Popelish wrote:
>
> On 01/14/2013 12:51 PM, redsp wrote:
>
> > Are you sure the reflected image of the resistance and
> > capacitance will be proportional to the coil ratio
> > squared and not just the coil ratio? I see I need to dig
> > into this a bit more.
>
> Quite.
>
> Voltage changes by turns ratio and current by inverse turns
> ratio. But impedance is the ratio of voltage divided by
> current, so the turns ratio comes into the impedance ratio,
> twice (second power).

You've given me something to think about. What about the inductance of the secondary? How does that impact the primary circuit? Wouldn't that affect the tuning of the primary?

I fired up my scope today and found it is not working properly. The horizontal sweep seems to be a bit diminished. So I may be in the market for a new one. I also have an equally old HP signal generator which seems to be outputting what looks like a rectified sine wave on the scale that covers 60 kHz. The lower ranges look fine. I took the cover off (for the first time) and it has a bazillion discretes and a number of transistors. Not sure where to start fixing it. Maybe I need a new sig gen as well. :(

Rick

9619. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-17 02:36:58 UTC
From: jpopelish
Topic: 9584 Message: 9619

--- In loopantennas@yahoogroups.com, "redsp" wrote:

> You've given me something to think about. What about the inductance of the secondary? How does that impact the primary circuit? Wouldn't that affect the tuning of the primary?
(snip)

According to the data sheet, the 200 turn winding has at least 80mH inductance. That means a single turn primary will have only 1/40,000th of that or 2uH inductance. This gives you an idea of the core they used, since you know roughly the size, and that it produces about 2uHy with one turn.

But you can add as many turns as you wish to the primary to raise the primary inductance and lower the turns ratio.

You can also tune the inductance with capacitance. This might work best with a series capacitor between the loop and the primary, and a parallel capacitance across the secondary of the transformer.

Sorry to hear about your test equipment.

--
Regards,

John Popelish

9620. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-17 02:45:13 UTC
From: jpopelish
Topic: 9584 Message: 9620

--- In loopantennas@yahoogroups.com, "jpopelish" wrote:

> According to the data sheet, the 200 turn winding has at least 80mH inductance. That means a single turn primary will have only 1/40,000th of that or 2uH inductance. This gives you an idea of the core they used, since you know roughly the size, and that it produces about 2uHy with one turn.
(snip)

The core is probably something like Fair-rite part# 5975000301.
http://www.fair-rite.com/cgibin/catalog.pgm#select:onepart
It produces at least 2.16 uH with one turn.

--

Regards,

John Popelish

9621. Re: Is this preamp worth anything ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-17 05:11:29 UTC
From: vbifyz
Topic: 9546 Message: 9621

To build an amplifier for a tuned loop AND LF band is easy, meaning that there is a wide range of components and topologies that would not limit the system performance.
Wideband untuned loop + HF band is a very different application, where the choice of components and amplifier topology is critical, because they will define the system performance (signal to noise and signal to unwanted signal ratios).

73, Mike

--- In loopantennas@yahoogroups.com, "ceo@..." wrote:
>
>
> What are peoples feelings on the front end of this circuit?
>
> http://users.tpg.com.au/users/ldbutler/ActiveLoopConverter.htm
>
> I want q-multiplier ability. The best loop I ever built had a FET q-multiplier attached to the tuned circuit, but the feed to the receiver came from a smaller single turn, closer to the centre of the loop (Q Multiplier and Spiral Loop Antenna - Maynard - Practical Wireless March 1981). I am considering using NE5534's in a balanced configuration.
>
> Discuss.
>
>
> On 16/01/2013, at 8:01 AM, vbifyz wrote:
>
> >
> > Hi Alberto,
> >
> > Most of the preamp modules are designed for 50 Ohm matched input.
> > This is not optimal for the loop.
> > There are designs published that use high speed opamp in an inverting configuration, which is supposed to give a very low input impedance and avoid using discrete transistors. I attempted to build such amplifier and had difficulties to keep it stable.
> > My impression is that Chris' and Chavdar's designs that use discrete transistors are the way to go. Chris' "secret sauce" is transformers, which require more build efforts but seem to improve the parameters.
>

9622. I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-17 16:25:36 UTC
From: k5gp@sbcglobal.net
Topic: 9622 Message: 9622

I just joined this group. What would you recommend as a hand held loop antenna for tracking down power line noise on 15 meters?
73 de k5gp Gene

9623. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-18 11:34:13 UTC
From: Jack Smith
Topic: 9622 Message: 9623

One does not normally use a loop to locate power line noise.

The method used is to use a non-directional antenna and a receiver that tunes to VHF/UHF frequencies. Driving (or walking) along the suspected power line, note the noise level and increase the frequency until the noise can just be heard. Repeat. In the case of a severe noise source, you may be able to hear it at 800 MHz or above.

This will get to you the pole usually.

To determine the hardware that may be bad, several techniques are used. One is a noise receiver operating around 200 MHz with a 3 element yagi. Another is an ultrasonic receiver. Yet another is a thermal imaging camera. In the best case these will identify the defective hardware.

Never a loop.

I used to do this for a living and also have worked with the local power company to solve a problem plaguing my reception.

Jack K8ZOA

On 1/17/2013 11:25 AM, k5gp@... wrote:
>
> I just joined this group. What would you recommend as a hand held loop
> antenna for tracking down power line noise on 15 meters?
> 73 de k5gp Gene
>
>

9624. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-18 12:39:32 UTC
From: Tim Hills
Topic: 9622 Message: 9624

Gene,

I've tracked down several noise sources with a small portable AM radio tuned to a "dead" spot in the band. I use a DX-399 but any handheld AM radio should work.

It works surprisingly well for many types of noise and the internal loop can null the source giving a bearing. YMMV since my interest is primarily MWDX but you might want to give "cheap and easy" a try before getting more elaborate.

Tim Hills
Sioux Falls, SD

On 1/17/2013 10:25, k5gp@... wrote:
>
> I just joined this group. What would you recommend as a hand held loop
> antenna for tracking down power line noise on 15 meters?
> 73 de k5gp Gene
>
>

9625. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-18 16:19:29 UTC
From: Myamiphil
Topic: 9622 Message: 9625

An AM radio even a little handheld portable does the job too... I have no problem telling what poles and stores are culprits for RF noise along my commute to and from work. Never used it to chase down wall warts but it would probably work for that too.

I used to use an am radio to check big rectifiers in medical equipment.. It was one of those multi-fin type rectifiers. It let me know if it was arcing (time to replace it)

But for higher frequency switching noise, maybe an fm radio.. I haven't tried it.

One time I was using headphones with a mike on Skype... came too close to a CF bulb and wiped out the communications with noise on the Skype channel I was one. Turned the mike off and I was fine.

The latest CF bulbs and even the LED type bulbs are great sources of noise, if your looking for something near. I think there's more RF pollution in a household than there is from power lines. But given the past "Sandy" storm and subsequent wind storms, there's lots of weakened wires and transformers.

Best Regards

Phil
Lat: 40.8367633
Long: -74.1768412

From: Jack Smith <Jack.Smith@...>
To: loopantennas@yahoogroups.com
Sent: Friday, January 18, 2013 6:34 AM
Subject: Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

One does not normally use a loop to locate power line noise.

The method used is to use a non-directional antenna and a receiver that tunes to VHF/UHF frequencies. Driving (or walking) along the suspected power line, note the noise level and increase the frequency until the noise can just be heard. Repeat. In the case of a severe noise source, you may be able to hear it at 800 MHz or above.

This will get to you the pole usually.

To determine the hardware that may be bad, several techniques are used. One is a noise receiver operating around 200 MHz with a 3 element yagi. Another is an ultrasonic receiver. Yet another is a thermal imaging camera. In the best case these will identify the

defective hardware.

Never a loop.

I used to do this for a living and also have worked with the local
power company to solve a problem plaguing my reception.

Jack K8ZOA

On 1/17/2013 11:25 AM, k5gp@... wrote:

>I just joined this group. What would you recommend as a hand held loop antenna for
tracking down power line noise on 15 meters?
>73 de k5gp Gene
>
>

9626. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-18 17:00:11 UTC
From: Jack Smith
Topic: 9622 Message: 9626

The problem with using a loop to track down strong interference sources on a power line is that the power line is a long antenna with standing waves.

Hence either it's impossible to obtain a null -- noise arrives from multiple sources at different angles -- or the null is a false direction (vector sum of multiple signals) or there is loop error because the loop null azimuth is only valid for vertically polarized signals.

I've seen one case where a loop gave a perfect null on a 500KV line transmission tower at 3.5 MHz. In fact, the noise source was 5 miles away at a switching substation where a wavetrap was arcing. You could even hear the arc, but a lot of time (and money) was spent poking around the wrong site. As best we could figure it out after the fact, it was a combination of a standing wave and an induced noise current on the transmission tower.

Yes, an AM radio can help, if that's all you have. But it's not the tool that professionals use. Rather, they use an "interference locating receiver" -- Sprague used to make one just for the power company RFI business -- that tunes up to a few hundred MHz. Drive along the line watching the S-meter and as the noise level increases, increase the frequency. The peak of frequency and strength is the source.

This method can fail, but it's many, many times more accurate at pinpointing the offending distribution pole.

We could hear the arcing wavetrap putting out noise with the receiver tuned to 1 GHz, by the way, when within a hundred feet or so of it. Trying to DF it with a loop at 3.5 MHz was useless.

Jack K8ZOA

On 1/18/2013 11:19 AM, Myamiphil wrote:
> An AM radio even a little handheld portable does the job too... I have
> no problem telling what poles and stores are culprits for RF noise
> along my commute to and from work. Never used it to chase down wall
> warts but it would probably work for that too.
>
> I used to use an am radio to check big rectifiers in medical
> equipment.. It was one of those multi-fin type rectifiers. It let me
> know if it was arcing (time to replace it)
>
> But for higher frequency switching noise, maybe an fm radio.. I
> haven't tried it.

>
> One time I was using headphones with a mike on Skype... came too close
> to a CF bulb and wiped out the communications with noise on the Skype
> channel I was one. Turned the mike off and I was fine.
>
> The latest CF bulbs and even the LED type bulbs are great sources of
> noise, if your looking for something near. I think there's more RF
> pollution in a household than there is from power lines. But given the
> past "Sandy" storm and subsequent wind storms, there's lots of
> weakened wires and transformers.
>
>
> Best Regards
>
> Phil
> Lat: 40.8367633
> Long: -74.1768412
>
> ---
> *From:* Jack Smith <Jack.Smith@...>
> *To:* loopantennas@yahoogroups.com
> *Sent:* Friday, January 18, 2013 6:34 AM
> *Subject:* Re: [loopantennas] I need a loop antenna for tracking down
> power line noise on 15 meters
>
> One does not normally use a loop to locate power line noise.
>
> The method used is to use a non-directional antenna and a receiver
> that tunes to VHF/UHF frequencies. Driving (or walking) along the
> suspected power line, note the noise level and increase the frequency
> until the noise can just be heard. Repeat. In the case of a severe
> noise source, you may be able to hear it at 800 MHz or above.
>
> This will get to you the pole usually.
>
> To determine the hardware that may be bad, several techniques are
> used. One is a noise receiver operating around 200 MHz with a 3
> element yagi. Another is an ultrasonic receiver. Yet another is a
> thermal imaging camera. In the best case these will identify the
> defective hardware.
>
> Never a loop.
>
> I used to do this for a living and also have worked with the local
> power company to solve a problem plaguing my reception.
>
> Jack K8ZOA
>
> On 1/17/2013 11:25 AM, k5gp@... <mailto:k5gp@...>
> wrote:

>> I just joined this group. What would you recommend as a hand held
>> loop antenna for tracking down power line noise on 15 meters?
>> 73 de k5gp Gene
>>
>
>
>
>

9627. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-18 15:58:30 UTC
From: Jerry Barr
Topic: 9622 Message: 9627

Hello? I had terrible power line noise / but discovered it with a 2 meter handheld /but couldnt pinpoint it /so threw togather a wire three element loop and spotted it in minutes/ pge guy said they spend ten grand on a machine to do the same thing/ hams do it better ! hihi

Jerry KJ6NTL

From: Tim Hills <thills@...>
To: loopantennas@yahoogroups.com
Sent: Friday, January 18, 2013 4:39 AM
Subject: Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Gene, I've tracked down several noise sources with a small portable AM radio tuned to a "dead" spot in the band. I use a DX-399 but any handheld AM radio should work. It works surprisingly well for many types of noise and the internal loop can null the source giving a bearing. YMMV since my interest is primarily MWDX but you might want to give "cheap and easy" a try before getting more elaborate. Tim Hills Sioux Falls, SD On 1/17/2013 10:25, k5gp@... wrote:

>I just joined this group. What would you recommend as a hand held loop antenna for tracking down power line noise on 15 meters?
>73 de k5gp Gene
>
>
>

9628. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-18 17:32:28 UTC
From: Jerry Barr
Topic: 9622 Message: 9628

loops can be directional so why do u say never a loop ?/ and a directionalantenna such as a 2 meter quad worked great for me finding power line noise with a two meter handheld fm radio,squelch down or off/ or a yagi wud work great as well

Jerry KJ6NTL

From: Myamiphil <myamiphil@...>
To: "loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Sent: Friday, January 18, 2013 8:19 AM
Subject: Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

An AM radio even a little handheld portable does the job too... I have no problem telling what poles and stores are culprits for RF noise along my commute to and from work. Never used it to chase down wall warts but it would probably work for that too.

I used to use an am radio to check big rectifiers in medical equipment.. It was one of those multi-fin type rectifiers. It let me know if it was arcing (time to replace it)But for higher frequency switching noise, maybe an fm radio.. I haven't tried it.One time I was using headphones with a mike on Skype... came too close to a CF bulb and wiped out the communications with noise on the Skype channel I was one. Turned the mike off and I was fine.The latest CF bulbs and even the LED type bulbs are great sources of noise, if your looking for something near. I think there's more RF pollution in a household than there is from power lines. But given the past "Sandy" storm and subsequent wind storms, there's lots of weakened wires and transformers.
Best Regards PhilLat: 40.8367633Long: -74.1768412

From: Jack Smith <Jack.Smith@...>
To: loopantennas@yahoogroups.com
Sent: Friday, January 18, 2013 6:34 AM
Subject: Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

One does not normally use a loop to locate power line noise.

The method used is to use a non-directional antenna and a receiver
that tunes to VHF/UHF frequencies. Driving (or walking) along the
suspected power line, note the noise level and increase the
frequency until the noise can just be heard. Repeat. In the case
of a severe noise source, you may be able to hear it at 800 MHz or
above.

This will get to you the pole usually.

To determine the hardware that may be bad, several techniques are used. One is a noise receiver operating around 200 MHz with a 3 element yagi. Another is an ultrasonic receiver. Yet another is a thermal imaging camera. In the best case these will identify the defective hardware.

Never a loop.

I used to do this for a living and also have worked with the local power company to solve a problem plaguing my reception.

Jack K8ZOA

On 1/17/2013 11:25 AM, k5gp@sbcglobal.net wrote:

>I just joined this group. What would you recommend as a hand held loop antenna for tracking down power line noise on 15 meters? 73 de k5gp Gene

9629. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-18 18:01:15 UTC
From: g.preston@...
Topic: 9622 Message: 9629

The loop led you to a tower on 80 m but if you
didn't hear the noise on UHF, you would have
known it was probably a false source. I would
not use the 80 m loop while under the power line
since you know the noise is propagating down the line anyway.

73 de k5gp

At 11:00 AM 1/18/2013, you wrote:

>The problem with using a loop to track down
>strong interference sources on a power line is
>that the power line is a long antenna with standing waves.
>
>Hence either it's impossible to obtain a null --
>noise arrives from multiple sources at different
>angles -- or the null is a false direction
>(vector sum of multiple signals) or there is
>loop error because the loop null azimuth is only
>valid for vertically polarized signals.
>
>I've seen one case where a loop gave a perfect
>null on a 500KV line transmission tower at 3.5
>MHz. In fact, the noise source was 5 miles away
>at a switching substation where a wavetrap was
>arcing. You could even hear the arc, but a lot
>of time (and money) was spent poking around the
>wrong site.Â As best we could figure it out
>after the fact, it was a combination of a
>standing wave and an induced noise current on the transmission tower.
>
>Yes, an AM radio can help, if that's all you
>have. But it's not the toolÂ that professionals
>use. Rather, they use an "interference locating
>receiver" -- Sprague used to make one just for
>the power company RFI business -- that tunes up
>to a few hundred MHz. Drive along the line
>watching the S-meter and as the noise level
>increases, increase the frequency.Â The peak of
>frequency and strength is the source.
>
>This method can fail, but it's many, many times
>more accurate at pinpointing the offending distribution pole.
>

>We could hear the arcing wavetrap putting out
>noise with the receiver tuned to 1 GHz, by the
>way, when within a hundred feet or so of it.
>Trying to DF it with a loop at 3.5 MHz was useless.
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>
>Jack K8ZOA
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>On 1/18/2013 11:19 AM, Myamiphil wrote:
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>>An AM radio even a little handheld portable
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>>rectifiers in medical equipment.. It was one of
>>those multi-fin type rectifiers. It let me know
>>if it was arcing (time to replace it)
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>>But for higher frequency switching noise, maybe
>>an fm radio.. I haven't tried it.
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>>out the communications with noise on the Skype
>>channel I was one. Turned the mike off and I was fine.
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>>are great sources of noise, if your looking for
>>something near. I think there's more RF
>>pollution in a household than there is from
>>power lines. But given the past "Sandy" storm
>>and subsequent wind storms, there's lots of weakened wires and transformers.
>>
>>
>>Best Regards
>>
>>Phil
>>Lat: 40.8367633
>>Long: -74.1768412
>>
>>
>>From: Jack Smith <mailto:Jack.Smith@...><Jack.Smith@...>
>>To: <mailto:loopantennas@yahoogroups.com>loopantennas@yahoogroups.com
>>Sent: Friday, January 18, 2013 6:34 AM
>>Subject: Re: [loopantennas] I need a loop
>>antenna for tracking down power line noise on 15 meters
>>

>>Â
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>>antenna and a receiver that tunes to VHF/UHF
>>frequencies. Driving (or walking) along the
>>suspected power line, note the noise level and
>>increase the frequency until the noise can just
>>be heard. Repeat. In the case of a severe noise
>>source, you may be able to hear it at 800 MHz or above.
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>>This will get to you the pole usually.
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>>To determine the hardware that may be bad,
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>>receiver operating around 200 MHz with a 3
>>element yagi. Another is an ultrasonic
>>receiver. Yet another is a thermal imaging
>>camera. In the best case these will identify the defective hardware.
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9630. Re: I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-19 05:05:49 UTC
From: AlienRelics
Topic: 9622 Message: 9630

Actually, he said "One does not normally use a loop to locate power line noise."

Loops have a directional null, so maybe a bit more art is needed in using one to track down noise.

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, Jerry Barr wrote:
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> loops can be directional so why do u say never a loop ?/ and a directionalantenna such as a 2 meter quad worked great for meÂ finding power line noiseÂ with a two meter handheld fm radio,squelch down or off/ or a yagi wud work great as well
>
>
> Jerry KJ6NTL
>
>

9631. Re: I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-19 06:15:03 UTC
From: AlienRelics
Topic: 9622 Message: 9631

My mistake, I spotted where he said "never".

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, "AlienRelics" wrote:
>
> Actually, he said "One does not normally use a loop to locate power line noise."
>
> Loops have a directional null, so maybe a bit more art is needed in using one to track down noise.
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9632. Re: I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-19 17:19:11 UTC
From: wb5wpa
Topic: 9622 Message: 9632

Would something as seen here work?

http://www.youtube.com/watch?v=SHjBcNtt5hA

The Degen makes for a halfway decent portable receiver for this purpose too ..

Jim

--- In loopantennas@yahoogroups.com, "k5gp@..." wrote:
>
> I just joined this group. What would you recommend as a hand held loop antenna for tracking down power line noise on 15 meters?
> 73 de k5gp Gene
>

9633. Re: I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-19 17:50:13 UTC
From: wb5wpa
Topic: 9622 Message: 9633

Some observations and conclusions I've come to in hunting down noisy distribution-level (as opposed to HV Transmission) poles and lines:

(1) Directly out, 90 degrees from a power pole, anything radiated from the voltage conductor 'wires' is cancelled. Think: T-top loaded vertical. Hint: The T-top does not radiate, it's a top load ...

(2) The majority of radiated EMI from a power pole observed from the street is from the *ground* wire coming down the pole (if it is properly connected at both ends.) Note I said majority, there are a few exceptions ...

(3) Using a tuned vertical loop also ignores any incidental horizontal components ... and since wire just hanging by itself isn't going to the the 'source' (compared to loose hardware, arcing surge suppressors, bad insulators) it's the POLE with the source one is interested in hunting down.

(4) One is better off hunting with a radio that covers the same *band* where your acring interference is showing up ... many sources out there on the poles have their own unique individual 'bands' they make noise in, especially when up close! Once be easily deceived if not careful to establish coincidence between a found noise source out in the field and a receiver in the shack.

Jim

--- In loopantennas@yahoogroups.com, Jack Smith wrote:
>
> The problem with using a loop to track down strong interference sources
> on a power line is that the power line is a long antenna with standing
> waves.
>
> Hence either it's impossible to obtain a null -- noise arrives from
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> (vector sum of multiple signals) or there is loop error because the loop
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> I've seen one case where a loop gave a perfect null on a 500KV line
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> away at a switching substation where a wavetrap was arcing. You could
> even hear the arc, but a lot of time (and money) was spent poking around
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> combination of a standing wave and an induced noise current on the
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> tool that professionals use. Rather, they use an "interference locating
> receiver" -- Sprague used to make one just for the power company RFI

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> frequency. The peak of frequency and strength is the source.
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> > Best Regards
> >
> > Phil
> > Lat: 40.8367633
> > Long: -74.1768412
> >
> > ---
> > *From:* Jack Smith
> > *To:* loopantennas@yahoogroups.com
> > *Sent:* Friday, January 18, 2013 6:34 AM
> > *Subject:* Re: [loopantennas] I need a loop antenna for tracking down
> > power line noise on 15 meters

> >
> > One does not normally use a loop to locate power line noise.
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> > The method used is to use a non-directional antenna and a receiver
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9634. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-20 00:18:43 UTC
From: g.preston@...
Topic: 9622 Message: 9634

I converted my HF loop from a shielded one to an unshielded floating loop with magnetic coupling. Here is the picture of the HF loop and Yachtboy general coverage HF RX. Also the pix shows 440 MHz yagi and Yaesu VX5R I listen on 441.7 MHz AM mode to pinpoint the noise once the loop gets me close to the source.
http://egpreston.com/K5GPloop1.jpg
The non grounded and floating large 13 inch loop is just a piece of RG8 coax with shield and center wired together and in series with a 360 pf variable cap. Wire could be used instead of the coax, but the coax was already there and is stiff enough to not need extra supports. The loop naturally tunes from 8 to 28 MHz. There is an extra fixed mica cap in parallel with the variable cap that has about 250 pf and allows the loop to tune from about 6 to 9 MHz when clipped across the variable capacitor. The 3,5 inch diameter (not critical) magnetic pickup coil is shown on this picture:
http://egpreston.com/K5GPloop2.jpg
Here is a picture of the connections between the large loop and the capacitor.
http://egpreston.com/K5GPloop3.jpg

How well does this floating loop design work? Initial testing revealed the loop tunes extremely sharp so the Q must be very high. The antenna has excellent gain and the reception of shortwave signals is much better than on the Yachtboy whip, but that's not saying much, since the little whip was not all that good an antenna. However you would not want to use this loop antenna for general coverage reception because it must be retuned each time you change receiver frequency. Note that you can pick up some signals on the inner small loop when the large loop is not in resonance so it should not be made too large.

After the loop was constructed this morning, I tuned up WWV on 10 and 15 MHz and the peaks and nulls were as expected with the direction of WWV being toward Colorado. The floating loop was very symmetrical, like the shielded loop was. However this loop is much easier to construct and get working than the shielded loop and uses fewer capacitors. The matching is achieved by the smaller loop being about 1/4th the size of the larger loop. The large loop is 13 inches diameter and the small loop is 3.5 inches diameter.

At noon my friend with the RFI problem returned my call and I went over to his house. He showed me what the noise sounded like on his HF receiver which was a soft mushy sound, not one that the noise blanker can take out. The noise was slightly louder on 24 MHz than 21 or 28. His HF beam gave the general direction as being north of

his house. He has distribution lines all over the place so the noise could be from any number of locations.

We went outside and could hear nothing on the VX5R and UHF yagi. So we fired up the HF loop and tuned around. At first we tried 21 MHz but his neighbors TV was generating noise. The HF loop indicated it was coming from his neighbors house. Then we went to 24 MHz and still could hear the TV. We tuned up to 26 MHz and the power line noise was heard as a light signal without the neighbor's TV interfering. There was also a sharp noise we didn't hear on his receiver in his house.

The loop indicated the noise was either north or south, but because his beam said it was north, we started walking north. The HF loop direction varied some as we walked along the street. There was a distribution line about 150 feet to our left or to the west which was also behind his house. We reached a point about a block north where the sound of the sharp noise indicated it was to the west. He said he was hearing that sound also on his vertical at this house but not on his beam.

At this point we were one block north and then we walked west following the location of the sharp noise on the HF loop. One block north and one block west the exact location on the HF loop could not be determined. However the UHF antenna on 440 pinpointed the sharp noise as coming from the pole one block north and one block west of his house. Returning back to the location one block north of his house we could clearly hear the softer noise source was coming from a pole one block north of this house. The sound was identical to what his HF rig was hearing at his house. The loop helped us to get in the general area and the UHF yagi pinpointed the two sources at two different locations.

So within a period of about 30 minutes we were able to pinpoint the two noise sources. The softer sounding noise he was hearing on his HF beam was on the pole one block due north and the sharper noise source he was hearing on his vertical was one block north and one block west. Going back to his house I checked the polarization of the sharp noise signal when in his back yard where the vertical is located and sure enough, the sharp noise source was almost completely vertically polarized. This explains why he was not hearing the sharp noise on his HF beam antenna.

My friend said that he would probably just sell his house and move out in the country where there are fewer power lines. He and I had struggled in the past on a similar noise problem and was becoming frustrated with having ongoing power line noise problems.

The conclusion is that the new floating loop has excellent performance and is easier to construct and tune than a shielded loop.

Good RFI hunting.

73 de k5gp, Gene
www.egpreston.com

9635. Re: I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-20 00:46:00 UTC
From: w8rmv
Topic: 9622 Message: 9635

Haven't read all the posts here, but powerline noise at my QTH was a circuit breaker. Removed & reinstalled it. Tightend up all wires & exercised the breaker a number of times & noise was gone. - 73 Bob

--- In loopantennas@yahoogroups.com, "k5gp@..." wrote:
>
> I just joined this group. What would you recommend as a hand held loop antenna for tracking down power line noise on 15 meters?
> 73 de k5gp Gene
>

9636. Active Antenna Amplifiers

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-20 15:07:45 UTC
From: Chris Trask
Topic: 4637 Message: 9636

Lately there has been a good deal of discussion about the overall performance of active antenna amplifiers, and now that the number of postings has decreased I felt it was a good time to bring up an issue pertaining to the overall discussion.

In general, the overall quality of an active antenna amplifier encompasses the intermodulation distortion (IMD) and noise figure (NF) performance. For the vast majority of transistors, you can have one or the other but very rarely both simultaneously. To be specific, good NF performance is usually obtained at low collector (or drain) currents, while good IMD performance requires substantially higher currents, resulting in higher NF.

NF is a result of two distinct noise mechanisms, being thermal (Nyquist) and 1/f (shot) noise. The first of these is wideband noise that is generally of low spectral density. The second, however, is low-frequency noise that becomes noticable at frequencies below 100kHz to 1MHz and which increases with lower frequency. You might think that 1/f noise is of no consequence at HF frequencies and higher, however it modulates the bias current, which in turn modulates the inband signals in the same manner that SSB phase noise on local oscillator (LO) signals results in reciprocal mixing.

One method that has been reduced to practice to overcome the high NF of high frequency devices is to use a low-noise audio transistor to detect the low-frequency noise at the emitter, amplify and invert it, then couple it to the base. Ulrich Rohde introduced the method for reducing the SSB phase noise of microwave oscillators, while at the same time I employed it for reducing the NF and even-order distortion in common-base and lossless feedback amplifiers.

I have not seen anyone making use of this method for active antenna amplifiers, yet is is a method that has been reduced to practice for some time. This seems to be a good moment to remind the designer community of this so that we can see some new applications and an advancement in the art of designing active antenna amplifiers.

Chris

9637. Re: [loopantennas] Active Antenna Amplifiers

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-20 17:52:11 UTC
From: Paul V Birke PEng
Topic: 4637 Message: 9637

clever stuff Chris

we have very low noise op amps as well for the audio range with ultralow distortion

LME49720

best Paul

From: Chris Trask <christrask@...>
To: Loop Antennas <loopantennas@yahoogroups.com>
Sent: Sunday, January 20, 2013 10:07:45 AM
Subject: [loopantennas] Active Antenna Amplifiers

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Chris

9638. Re: [loopantennas] Active Antenna Amplifiers

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-20 17:54:42 UTC
From: Paul V Birke PEng
Topic: 4637 Message: 9638

makes you wonder why IF stages at 455 kHz are not designed with the audio transistor inversion trick!!

best Paul

From: Chris Trask <christrask@...>
To: Loop Antennas <loopantennas@yahoogroups.com>
Sent: Sunday, January 20, 2013 10:07:45 AM
Subject: [loopantennas] Active Antenna Amplifiers

Lately there has been a good deal of discussion about the overall performance of active antenna amplifiers, and now that the number of postings has decreased I felt it was a good time to bring up an issue pertaining to the overall discussion.

In general, the overall quality of an active antenna amplifier encompasses the intermodulation distortion (IMD) and noise figure (NF) performance. For the vast majority of transistors, you can have one or the other but very rarely both simultaneously. To be specific, good NF performance is usually obtained at low collector (or drain) currents, while good IMD performance requires substantially higher currents, resulting in higher NF.

NF is a result of two distinct noise mechanisms, being thermal (Nyquist) and 1/f (shot) noise. The first of these is wideband noise that is generally of low spectral density. The second, however, is low-frequency noise that becomes noticable at frequencies below 100kHz to 1MHz and which increases with lower frequency. You might think that 1/f noise is of no consequence at HF frequencies and higher, however it modulates the bias current, which in turn modulates the inband signals in the same manner that SSB phase noise on local oscillator (LO) signals results in reciprocal mixing.

One method that has been reduced to practice to overcome the high NF of high frequency devices is to use a low-noise audio transistor to detect the low-frequency noise at the emitter, amplify and invert it, then couple it to the base. Ulrich Rohde introduced the method for reducing the SSB phase noise of microwave oscillators, while at the same time I employed it for reducing the NF and even-order distortion in common-base and lossless feedback amplifiers.

I have not seen anyone making use of this method for active antenna amplifiers, yet is is a method that has been reduced to practice for some time. This seems to be a good moment to remind the designer community of this so that we can see some new applications and an advancement in the art of designing active antenna amplifiers.

Chris

9639. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-20 21:51:52 UTC
From: Mauno Ritola
Topic: 9622 Message: 9639

A bit off-topic, but I can confirm this from hard experience: the open air ADSL and telephone line coming to our house produced a big noise field for almost a decade. It was impossible to determine the exact point, where the noise was the strongest. And of course the local telephone company (telekarelia.fi , warm greetings to them ;-)) denied any responsibility for the noise and said it was impossible, because they can 'see' from the control centre, that everything is OK. Driving and listening from car radio it was exactly like you describe, getting stronger and weaker depending on where you were. The same with direction-finding it with portable radio and its ferrite antenna. The noise spread at varying strength all along the line for a couple of km and 300 m wide. It was the worst between 500-2000 kHz. Nothing helped. Last summer the ADSL connection began to break: short, irregular breaks. After a big fight and threats with extra costs the telephone company sent a technician to check the line. And yes, at one pole the outer layer of the cable had worn out during years, moving against the pole. He fixed it (probably by tape;-)) and most of the noise has been gone ever since.

Best regards,

Mauno
Finland

18.1.2013 19:00, Jack Smith kirjoitti:
>
> The problem with using a loop to track down strong interference
> sources on a power line is that the power line is a long antenna with
> standing waves.
>
> Hence either it's impossible to obtain a null -- noise arrives from
> multiple sources at different angles -- or the null is a false
> direction (vector sum of multiple signals) or there is loop error
> because the loop null azimuth is only valid for vertically polarized
> signals.
>
> I've seen one case where a loop gave a perfect null on a 500KV line
> transmission tower at 3.5 MHz. In fact, the noise source was 5 miles
> away at a switching substation where a wavetrap was arcing. You could
> even hear the arc, but a lot of time (and money) was spent poking
> around the wrong site. As best we could figure it out after the fact,
> it was a combination of a standing wave and an induced noise current
> on the transmission tower.
>

> Yes, an AM radio can help, if that's all you have. But it's not the
> tool that professionals use. Rather, they use an "interference
> locating receiver" -- Sprague used to make one just for the power
> company RFI business -- that tunes up to a few hundred MHz. Drive
> along the line watching the S-meter and as the noise level increases,
> increase the frequency. The peak of frequency and strength is the source.
>
> This method can fail, but it's many, many times more accurate at
> pinpointing the offending distribution pole.
>
> We could hear the arcing wavetrap putting out noise with the receiver
> tuned to 1 GHz, by the way, when within a hundred feet or so of it.
> Trying to DF it with a loop at 3.5 MHz was useless.
>
>
> Jack K8ZOA
>
> On 1/18/2013 11:19 AM, Myamiphil wrote:
>> An AM radio even a little handheld portable does the job too... I
>> have no problem telling what poles and stores are culprits for RF
>> noise along my commute to and from work. Never used it to chase down
>> wall warts but it would probably work for that too.
>>
>> I used to use an am radio to check big rectifiers in medical
>> equipment.. It was one of those multi-fin type rectifiers. It let me
>> know if it was arcing (time to replace it)
>>
>> But for higher frequency switching noise, maybe an fm radio.. I
>> haven't tried it.
>>
>> One time I was using headphones with a mike on Skype... came too
>> close to a CF bulb and wiped out the communications with noise on the
>> Skype channel I was one. Turned the mike off and I was fine.
>>
>> The latest CF bulbs and even the LED type bulbs are great sources of
>> noise, if your looking for something near. I think there's more RF
>> pollution in a household than there is from power lines. But given
>> the past "Sandy" storm and subsequent wind storms, there's lots of
>> weakened wires and transformers.
>>
>>
>> Best Regards
>>
>> Phil
>> Lat: 40.8367633
>> Long: -74.1768412
>>
>> ---
>> *From:* Jack Smith <Jack.Smith@...>
>> *To:* loopantennas@yahoogroups.com

>> *Sent:* Friday, January 18, 2013 6:34 AM
>> *Subject:* Re: [loopantennas] I need a loop antenna for tracking down
>> power line noise on 15 meters
>>
>> One does not normally use a loop to locate power line noise.
>>
>> The method used is to use a non-directional antenna and a receiver
>> that tunes to VHF/UHF frequencies. Driving (or walking) along the
>> suspected power line, note the noise level and increase the frequency
>> until the noise can just be heard. Repeat. In the case of a severe
>> noise source, you may be able to hear it at 800 MHz or above.
>>
>> This will get to you the pole usually.
>>
>> To determine the hardware that may be bad, several techniques are
>> used. One is a noise receiver operating around 200 MHz with a 3
>> element yagi. Another is an ultrasonic receiver. Yet another is a
>> thermal imaging camera. In the best case these will identify the
>> defective hardware.
>>
>> Never a loop.
>>
>> I used to do this for a living and also have worked with the local
>> power company to solve a problem plaguing my reception.
>>
>> Jack K8ZOA
>>
>> On 1/17/2013 11:25 AM, k5gp@... <mailto:k5gp@...>
>> wrote:
>>> I just joined this group. What would you recommend as a hand held
>>> loop antenna for tracking down power line noise on 15 meters?
>>> 73 de k5gp Gene
>>>
>>
>>
>>
>
>

9640. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-21 02:58:49 UTC
From: kevin asato
Topic: 9622 Message: 9640

>depending on where you were. The same with direction-finding it with portable radio and its ferrite antenna. The noise spread at varying strength all >along the line for a couple of km and 300 m wide. It was the worst between 500-2000 kHz. Nothing helped.

That's pretty much a sweet spot for ADSL transmission from the Exchange Office to your home. The noise (digital signalling) will vary by frequency as ADSL is a spread spectrum transmission system. The signalling is to be contained within the twisted pair cabling but we all know how that works - impedance changes due to bad splices, protectors, and aging facilities (corroded terminals) will cause the cable pair to go unbalanced and let the signal leak at various points along the cable.

73,
kevin
kc6pob

9641. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-21 03:54:02 UTC
From: Myamiphil
Topic: 9622 Message: 9641

Back when I was using the phone lines for internet, I was constantly being dropped by Earthlink... The phone company changed the line to the house, and the pair from the street junction box was changed twice. The seconnd time the tech told me he was just recycling used pairs that were traded out for similar reasons. That's when I learned that the copper phone lines on the pole were no longer being purged with nitrogen or whatever gas they traditionally used. The lines were being allowed to decay as cell phone were becoming the major source phone links. This was also way before Bells Fiber lines. They're still fine for phone connections but crap for ADSL. That's when I switched to cable for Internet. Been fine ever since.

But it was noisy lines they gave me a very low input sig. Some freeware showed me that before I switched. Cable was a little bit of a problem in the beginning, but again a signal eval disclosed my house runs were part of the problem. They ran one line to my main computer location and then from there I had the house Ethernet switch. Never had a problem since.

The main idea is that the electrical and phone services (copper or fiber) are not always perfect. Trying to prove things can be a little of a pain. An sometimes they are purposely letting the old hardware go down the tubes because its obsolete. No advantage to being at the end of a network run. Your signal is just poor. Electric can be just as bad.... Who knows how far you have to go to prove your part of whatever circuit.

I work in the hospital environment. One hospital admitted they they had noisy power at their input transformer. It was beyond their control. And that meant they had to contend with all sorts of AC signal quality issues when it affected all the computer operated equipment in the facility.

I would think they electric company you choose has to contend with the same issues. You might buy your power from an environmentally friendly power company, but the power still comes over the same wires. If they're crappy so's your power no matter where it comes from.

The home can be just a bad a source of noise as the outside world. Maybe worse. The X10 appliance controls I use in my house are going down the tubes too... But its not the electric company's fault. With all the wall warts and switching transformers these days, I'm generating tremendous noise within the house on the lines and in the air. I'm sure I'd see plenty of noise. But I can't afford to filter every device in the house... I'd go broke with all the chokes I'd have to buy.... Filtering isn't exactly required for home environments. Ever since I did the environmentally correct thing and switched to CFs and LED lamps, my home control has gone down the tubes. Hate them if you like, but incandescents are becoming obsolete.

Even beyond power supplies, there's plenty of noise sources coming from all sorts of computer operated devices. What doesn't use a computer these days! Both copper and electromagnetic environments are challenges.

Best Regards

Phil
Lat: 40.8367633
Long: -74.1768412

From: kevin asato <kc6pob@...>
To: "loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Sent: Sunday, January 20, 2013 9:58 PM
Subject: Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

>depending on where you were. The same with direction-finding it with portable radio and its ferrite antenna. The noise spread at varying strength all >along the line for a couple of km and 300 m wide. It was the worst between 500-2000 kHz. Nothing helped.

That's pretty much a sweet spot for ADSL transmission from the Exchange Office to your home. The noise (digital signalling) will vary by frequency as ADSL is a spread spectrum transmission system. The signalling is to be contained within the twisted pair cabling but we all know how that works - impedance changes due to bad splices, protectors, and aging facilities (corroded terminals) will cause the cable pair to go unbalanced and let the signal leak at various points along the cable.

73,
kevin
kc6pob

9642. Re: [loopantennas] I need a loop antenna for tracking down power line noise on 15 meters

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-21 14:51:13 UTC
From: Mauno Ritola
Topic: 9622 Message: 9642

Thank you Kevin and Phil for your comments. In my case the biggest problem was the broken cable, when it was fixed, most of the noise disappeared. I have got good advice from guys like Leif sm5bsz in the fight against noise and I think the situation is now good, please check online via sdrspace.com or Perseus network in eastern Finland. I hope we get underground fibre cable in the coming years, that will still improve the situation.
Thanks for the bandwidth and now back to topic.

73, Mauno

21.1.2013 4:58, kevin asato kirjoitti:
>
> >depending on where you were. The same with direction-finding it with
> portable radio and its ferrite antenna. The noise spread at varying
> strength all >along the line for a couple of km and 300 m wide. It was
> the worst between 500-2000 kHz. Nothing helped.
>
> That's pretty much a sweet spot for ADSL transmission from the
> Exchange Office to your home. The noise (digital signalling) will vary
> by frequency as ADSL is a spread spectrum transmission system. The
> signalling is to be contained within the twisted pair cabling but we
> all know how that works - impedance changes due to bad splices,
> protectors, and aging facilities (corroded terminals) will cause the
> cable pair to go unbalanced and let the signal leak at various points
> along the cable.
>
> 73,
> kevin
> kc6pob
> ---
> **
>
>

9643. Re: Active Antenna Amplifiers

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-21 09:42:37 UTC
From: ik1wvq
Topic: 4637 Message: 9643

Hi,
what is your opinion about the use of OPERATIONAL AMPLIFIERS as
AD8009 or OPA847, declared low noise and high IMD ??

I tried a single OPA847 inverting amplifier configuration with 10 ohm Rg and 1 Kohm Rf
(loop conncted to Rg via a 2uF multilayer capacitor)..
This seems to work, but I do not have sufficient instrumentation for measuring noise and
IMD, nor a standard loop to compare with mine.

thanks to all.

best regard

Mauro IK1WVQ

--- In loopantennas@yahoogroups.com, "Chris Trask" wrote:
>
> Over the holidays, I took a great deal of time to investigate some ideas
> that I had with regard to the design of lossless feedback amplifiers in an
> effort to improve the dynamic range of active antennas, both in terms of
> noise figure (NF) and distortion (IMD products). I had quite a bit of
> success, and wrote a monologue about some of what I did:
>
> http://www.home.earthlink.net/~christrask/Lossless%20Feedback%20Amplifiers.p
> df
>
> The details of all this, plus some other advanced techniques, are part of a
> full article that I'm presently writing.
>
> Chris
>
> ,----------------------. High Performance Mixers and
> / What's all this \ Amplifiers for RF Communications
> / extinct stuff, anyhow? /
> \ _______,--------------' Chris Trask / N7ZWY
> _ |/ Principal Engineer
> oo\ Sonoran Radio Research
> (__)\ _ P.O. Box 25240
> \ \ .' `. Tempe, Arizona 85285-5240
> \ \ / \
> \ '" \ IEEE Senior Member #40274515
> . ( ) \
> '-|)__| :. \ Email: christrask@...
> | | | | \ '. http://www.home.earthlink.net/~christrask
> c__; c__; '-..'>.__
>

> Graphics by Loek Frederiks
>

9644. Re: Active Antenna Amplifiers

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-21 11:07:14 UTC
From: ik1wvq
Topic: 4637 Message: 9644

Hi,
what is your opinion about the use of a operational amplifier like AD8009 or OPA847, declaring low NF and high IMD ???

I am trying a single inverting amplifier configuration (10 ohm Rg, 1 kohm Rf, single turn loop connected to Rg via a 2uF multilayer chip) with a OPA847.

this seems to work, but I do not have sufficient instrumentation to made serious measurements of NF and IMD..

Many thanks ..
best regards to all.

Mauro IK1WVQ

9645. RE: [loopantennas] Re: Active Antenna Amplifiers

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-22 08:42:26 UTC
From: dx11
Topic: 4637 Message: 9645

Just FYI I know of two loop designs with the OP847, they can be seen at:

http://wl1030.pa3ang.nl/content/ (This one is in English. You need to register here to get access, but that no other consequences)

http://dijkjj.home.xs4all.nl/download/bqc-wl1030xx.pdf (This one is in Dutch, but with lots of pictures, so you will understand anyway).

Cor Beijersbergen

9646. (no subject)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-22 12:53:44 UTC
From: J Ferrow
Topic: 9646 Message: 9646

http://ozsemir.com/cnbc.php?negative309.bmp

Best regards,
J Ferrow
1/22/2013 1:53:43 PM

9647. Re: Active Antenna Amplifiers

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-22 20:56:07 UTC
From: ik1wvq
Topic: 4637 Message: 9647

many thanks Cor,
the WL1030 project is very interesting, but this is the only one (what I know) using this approach ...

thanks again

regards
Mauro IK1WVQ

--- In loopantennas@yahoogroups.com, "dx11" wrote:
>
> Just FYI I know of two loop designs with the OP847, they can be seen at:
>
> http://wl1030.pa3ang.nl/content/ (This one is in English. You need to
> register here to get access, but that no other consequences)
>
>
> http://dijkjj.home.xs4all.nl/download/bqc-wl1030xx.pdf (This one is in
> Dutch, but with lots of pictures, so you will understand anyway).
>
> Cor Beijersbergen
>

9648. Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-27 02:13:21 UTC
From: kd0qnm
Topic: 9648 Message: 9648

I know that for a mag loop, resistive losses are huge. Ideally, a single section of soft copper tubing or soldered joints are preferred.

That being said, has anyone measured how much loss actually occurs in a soldered vs unsoldered joint?

I ask b/c I am trying to build a portable mag-loop that can fit in the trunk of my car. Wanting to work 20/40 meters efficiently means my diameter ends up on the larger side. This makes a soldered loop self-defeating.

Any thoughts?

73,

KD0QNM

9649. Re: [loopantennas] Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-27 06:50:19 UTC
From: toddroberts2001@...
Topic: 9648 Message: 9649

For a mag loop, unsoldered joints cannot be trusted at all. They are unacceptable, period.

For a large portable mag loop consider using a flexible copper element that can be folded
like copper flashing. I don't remember the formula but a certain width of copper
flashing is equivalent to round copper tubing. For example I think a 2-inch wide strip
of copper flashing is approximately equal to a one-inch diameter copper pipe. Plus
copper flashing is very light weight compared to copper pipe which would be another advantage for a portable mag loop.

A framework of PVC pipe that can be assembled in the field
can be built to support the copper flashing loop element. I built a transmitting loop using copper
flashing supported by a wooden frame years ago so I know the copper flashing idea works well.
If you use a long enough strip of copper flashing it can all be made using one
piece using no solder joints at all.

73 - Todd WD4NGG

In a message dated 1/27/2013 12:11:54 A.M. Eastern Standard Time, nsquidc@... writes:

I know that for a mag loop, resistive losses are huge. Ideally, a single section of soft copper tubing or soldered joints are preferred.

That being said, has anyone measured how much loss actually occurs in a soldered vs unsoldered joint?

I ask b/c I am trying to build a portable mag-loop that can fit in the trunk of my car. Wanting to work 20/40 meters efficiently means my diameter ends up on the larger side. This makes a soldered loop self-defeating.

Any thoughts?

73,

KD0QNM

9650. Re: [loopantennas] Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-27 07:05:20 UTC
From: John Popelish
Topic: 9648 Message: 9650

On 01/27/2013 01:50 AM, toddroberts2001@... wrote:
> For a mag loop, unsoldered joints cannot be trusted at all. They are
> unacceptable, period.

I think flared tubing fittings make very good electrical
contact.

--
Regards,

John Popelish

9651. Re: [loopantennas] Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-27 11:04:55 UTC
From: g.preston@...
Topic: 9648 Message: 9651

I built a 40 meter loop out of 5/8 copper tubing that was about 6 ft dia as I recall. I used two copper clad pc boards separated by teflon screws for adjusting the spacing to change the capacitance. The loop was floating, not grounded. The 50 ohm match was achieved by adjusting the size of the inner loop connected to the rig. The pc boards were heavily soldered to the copper tubing to reduce the resistance of the connections. I have no idea what their soldered resistance was. The 1 to 1 swr could be achieved. However the frequency drifted when power was put to the antenna, indicating heating somewhere. The q was extremely high so the drift in freq due to heating was a problem. However it did get fairly good signal reports compared to a nvis dipole. I found it to be bulky and would not make a very good portable antenna for 40 meters compared to a whip. It was an interesting experiment however. It had low static noise and low noise from power line noise.

73 de k5gp

At 08:13 PM 1/26/2013, you wrote:
>I know that for a mag loop, resistive losses are huge. Ideally, a
>single section of soft copper tubing or soldered joints are preferred.
>
>That being said, has anyone measured how much loss actually occurs
>in a soldered vs unsoldered joint?
>
>I ask b/c I am trying to build a portable mag-loop that can fit in
>the trunk of my car. Wanting to work 20/40 meters efficiently means
>my diameter ends up on the larger side. This makes a soldered loop
>self-defeating.
>
>Any thoughts?
>
>73,
>
>KD0QNM
>
>
>
>------------------------------------
>
>If you've got links, post them in the Links section!
>http://groups.yahoo.com/group/loopantennas/links
>
>Post files here. If the file comes from a website, please put it in
>the Links rather than uploading the file.

>http://groups.yahoo.com/group/loopantennas/files
>
>You can now view images at higher resolution in Photos. Upload JPG
>and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
>http://ph.groups.yahoo.com/group/loopantennas/photos
>
>And please trim all this when replying!Yahoo! Groups Links
>
>
>

9652. MFJ Hi-Q loop installed Horizontaly

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-27 11:12:05 UTC
From: the_dalcassian
Topic: 9652 Message: 9652

I have just installed my MFJ Hi-Q loop 7-21Mhz Horizontally and am having excellent results, but I ask if the support pole was extended thro the center could it be used to support a (Say) 2m / 70 CM / 6M vertical as well without detrimental effect to the HI-Q loop operation? Has anyone done this. Comments apreciated Kind regards Rodger (G8HLH) at <email address removed by moderator, please direct responses to the list>

9653. Re: [loopantennas] MFJ Hi-Q loop installed Horizontaly

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-27 20:23:52 UTC
From: g.preston@...
Topic: 9652 Message: 9653

A metal pole might have induced currents causing losses. A wooden or plastic pole would solve that problem.

73 de k5gp

At 05:12 AM 1/27/2013, you wrote:
>I have just installed my MFJ Hi-Q loop 7-21Mhz Horizontally and am
>having excellent results, but I ask if the support pole was extended
>thro the center could it be used to support a (Say) 2m / 70 CM / 6M
>vertical as well without detrimental effect to the HI-Q loop
>operation? Has anyone done this. Comments apreciated Kind regards
>Rodger (G8HLH) at <email address removed by moderator, please direct
>responses to the list>

9654. Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-27 22:33:09 UTC
From: redsp
Topic: 9648 Message: 9654

--- In loopantennas@yahoogroups.com, "kd0qnm" wrote:
>
> I know that for a mag loop, resistive losses are huge. Ideally, a single section of soft copper tubing or soldered joints are preferred.
>
> That being said, has anyone measured how much loss actually occurs in a soldered vs unsoldered joint?
>
> I ask b/c I am trying to build a portable mag-loop that can fit in the trunk of my car. Wanting to work 20/40 meters efficiently means my diameter ends up on the larger side. This makes a soldered loop self-defeating.
>
> Any thoughts?

If you check out the plumbing department you will find all sorts of plumbing components. There are screw on type connectors that are soldered to the pipe and have a great deal of contact area and should provide a pretty low ohmic connection. Or have you already been down that road and this is what you are thinking of avoiding?

Another approach would be to join the copper tubing with short sections of soldered braid. This could be a fold point for storing and stiffened with a non-metallic sleeve which is slid over the braid when you want it to be a loop. The braid would be all soldered and so should have absolute minimum resistance.

Rick

9655. Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-28 02:17:04 UTC
From: kd0qnm
Topic: 9648 Message: 9655

Copper flashing -- what a great idea Todd.

Anyone know what the exact conversion from strip to tube diameter would be though? I would want to calculate out the required capacitance beforehand (so as to purchase the proper variable cap), and am not sure how to do so with a strip.

73, and tnx again.

~KD0QNM (Dan)

--- In loopantennas@yahoogroups.com, toddroberts2001@... wrote:
>
> For a mag loop, unsoldered joints cannot be trusted at all. They are
> unacceptable, period.
>
> For a large portable mag loop consider using a flexible copper element that
> can be folded
> like copper flashing. I don't remember the formula but a certain width of
> copper
> flashing is equivalent to round copper tubing. For example I think a 2-inch
> wide strip
> of copper flashing is approximately equal to a one-inch diameter copper
> pipe. Plus
> copper flashing is very light weight compared to copper pipe which would be
> another advantage for a portable mag loop.
>
>
> A framework of PVC pipe that can be assembled in the field
> can be built to support the copper flashing loop element. I built a
> transmitting loop using copper
> flashing supported by a wooden frame years ago so I know the copper
> flashing idea works well.
> If you use a long enough strip of copper flashing it can all be made using
> one
> piece using no solder joints at all.
>
> 73 - Todd WD4NGG
>
> In a message dated 1/27/2013 12:11:54 A.M. Eastern Standard Time,
> nsquidc@... writes:
>
> I know that for a mag loop, resistive losses are huge. Ideally, a single
> section of soft copper tubing or soldered joints are preferred.
>
> That being said, has anyone measured how much loss actually occurs in a
> soldered vs unsoldered joint?

>
> I ask b/c I am trying to build a portable mag-loop that can fit in the
> trunk of my car. Wanting to work 20/40 meters efficiently means my diameter
> ends up on the larger side. This makes a soldered loop self-defeating.
>
> Any thoughts?
>
> 73,
>
> KD0QNM
>

9656. Re: [loopantennas] Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-28 02:45:02 UTC
From: Don
Topic: 9648 Message: 9656

Is it not 3.141 x the diameter?

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FRG-100B SR-AF & LPF
DSP599zx MFJ-784B HD-1418 AF-1 MSB-1
PA0RDT Mini-Whip x2 @ 25ft
RYO Active Antenna @ 25ft
LFL1010 ALA100L x2

On 27-Jan-13 18:17, kd0qnm wrote:
> Copper flashing -- what a great idea Todd.
>
> Anyone know what the exact conversion from strip to tube diameter would be though? I would want to calculate out the required capacitance beforehand (so as to purchase the proper variable cap), and am not sure how to do so with a strip.
>
> 73, and tnx again.
>
> ~KD0QNM (Dan)
>
> --- In loopantennas@yahoogroups.com, toddroberts2001@... wrote:
>>
>> For a mag loop, unsoldered joints cannot be trusted at all. They are
>> unacceptable, period.
>>
>> For a large portable mag loop consider using a flexible copper element that
>> can be folded
>> like copper flashing. I don't remember the formula but a certain width of
>> copper
>> flashing is equivalent to round copper tubing. For example I think a 2-inch
>> wide strip
>> of copper flashing is approximately equal to a one-inch diameter copper
>> pipe. Plus
>> copper flashing is very light weight compared to copper pipe which would be
>> another advantage for a portable mag loop.
>>
>>
>> A framework of PVC pipe that can be assembled in the field
>> can be built to support the copper flashing loop element. I built a
>> transmitting loop using copper
>> flashing supported by a wooden frame years ago so I know the copper
>> flashing idea works well.

>> If you use a long enough strip of copper flashing it can all be made using
>> one
>> piece using no solder joints at all.
>>
>> 73 - Todd WD4NGG
>>
>> In a message dated 1/27/2013 12:11:54 A.M. Eastern Standard Time,
>> nsquidc@... writes:
>>
>> I know that for a mag loop, resistive losses are huge. Ideally, a single
>> section of soft copper tubing or soldered joints are preferred.
>>
>> That being said, has anyone measured how much loss actually occurs in a
>> soldered vs unsoldered joint?
>>
>> I ask b/c I am trying to build a portable mag-loop that can fit in the
>> trunk of my car. Wanting to work 20/40 meters efficiently means my diameter
>> ends up on the larger side. This makes a soldered loop self-defeating.
>>
>> Any thoughts?
>>
>> 73,
>>
>> KD0QNM
>>
>
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>
>
>
> -----
> No virus found in this message.

> Checked by AVG - www.avg.com
> Version: 2013.0.2890 / Virus Database: 2639/6055 - Release Date: 01/24/13
>
>

9657. Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-28 03:05:09 UTC
From: redsp
Topic: 9648 Message: 9657

If we are talking about resistance, I'm not sure it is that simple. The skin effect should behave differently on a flat strip than on a round tube. I think the tube will be a better geometry, but the strip will likely be thinner and so not as subject to the skin effect, depending on the frequency vs. the thickness. How thick is a copper strip? Or, how long is a piece of string?

As to the loop inductance, I don't think that will be significantly different from a pipe. In fact, the first formulas for inductance assume the coils are infinitely flat strips of conductor with infinitely narrow gaps between windings, hence the terms "sheet" inductance. All of the current flows in a sheet describing the coil. They have to make messy adjustments to the formulas to compensate for the geometry of "real" wires and tubing.

Is this really a practical approach? How many times can a copper sheet be bent before it creases and cracks?

Rick

--- In loopantennas@yahoogroups.com, Don wrote:
>
> Is it not 3.141 x the diameter?
>
> Don KPC6NDB
> Upland, CA
> 34.10 -117.63 1250ft
> R-75 w/250Hz 2x R-71A w/250Hz R-70
> Perseus SDR-IQ FRG-100B SR-AF & LPF
> DSP599zx MFJ-784B HD-1418 AF-1 MSB-1
> PA0RDT Mini-Whip x2 @ 25ft
> RYO Active Antenna @ 25ft
> LFL1010 ALA100L x2
>
> On 27-Jan-13 18:17, kd0qnm wrote:
> > Copper flashing -- what a great idea Todd.
> >
> > Anyone know what the exact conversion from strip to tube diameter would be though? I would want to calculate out the required capacitance beforehand (so as to purchase the proper variable cap), and am not sure how to do so with a strip.
> >
> > 73, and tnx again.
> >
> > ~KD0QNM (Dan)

9658. Re: [loopantennas] Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-28 03:25:37 UTC
From: toddroberts2001@...
Topic: 9648 Message: 9658

Dan,
I cannot find exact conversion from copper strip to copper tubing but the general rule of thumb for antenna builders is one-half the width of copper strip is equivalent to a round copper tube. So a two-inch wide strip of copper is about the same RF Resistance as a one-inch diameter round copper pipe or tubing.

A good supplier of flat copper strap in various lengths and widths is Georgia Copper :

http://www.gacopper.com/012-CopperStrap.html

You want the copper strip to be several times the thickness of skin depth at the operating frequency. Skin depth at 40 meters is about 1 mil so a 12 mils thick copper strip will work fine on all amateur frequencies above 160 meters.

73 - Todd WD4NGG

In a message dated 1/27/2013 9:17:11 P.M. Eastern Standard Time, nsquidc@... writes:

Copper flashing -- what a great idea Todd.

Anyone know what the exact conversion from strip to tube diameter would be though? I would want to calculate out the required capacitance beforehand (so as to purchase the proper variable cap), and am not sure how to do so with a strip.

73, and tnx again.

~KD0QNM (Dan)

9659. Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-28 09:27:45 UTC
From: Nestor Escala
Topic: 9648 Message: 9659

Dan

"Anyone know what the exact conversion from strip to tube diameter would be though?"

Te equivalent radio for strip to tube diameter is:

Req = (a + b) / 2

where

a: strip width
b: strip height

Best regards

----- Original Message -----
From: toddroberts2001@...
To: loopantennas@yahoogroups.com
Sent: Monday, January 28, 2013 12:25 AM
Subject: Re: [loopantennas] Re: Soldered vs unsoldered joints

Dan,
I cannot find exact conversion from copper strip to copper tubing but the general rule of thumb for antenna builders is one-half the width of copper strip is equivalent to a round copper tube. So a two-inch wide strip of copper is about the same RF Resistance as a one-inch diameter round copper pipe or tubing.

A good supplier of flat copper strap in various lengths and widths is Georgia Copper :

http://www.gacopper.com/012-CopperStrap.html

You want the copper strip to be several times the thickness of skin depth at the operating frequency. Skin depth at 40 meters is about 1 mil so a 12 mils thick copper strip will work fine on all amateur frequencies above 160 meters.

73 - Todd WD4NGG

In a message dated 1/27/2013 9:17:11 P.M. Eastern Standard Time, nsquidc@... writes:

Copper flashing -- what a great idea Todd.

Anyone know what the exact conversion from strip to tube diameter would be though? I would want to calculate out the required capacitance beforehand (so as to purchase the proper variable cap), and am not sure how to do so with a strip.

73, and tnx again.

~KD0QNM (Dan)

--

Caselle da 1GB, trasmetti allegati fino a 3GB e in piu' IMAP, POP3 e SMTP autenticato? GRATIS solo con Email.it http://www.email.it/f

Sponsor:

Voglia di Puzzle? Su MisterCupido.com troverai i "Puzzle Clementoni High Quality" a partire da soli euro 8,30

Clicca qui: http://adv.email.it/cgi-bin/foclick.cgi?mid=12676&d=28-1

9660. Re: [loopantennas] Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-29 20:11:39 UTC
From: Harold
Topic: 9648 Message: 9660

I'd go ahead and put it together un soldered.
Let us know how it works out.

you can always go back and solder the Joints

I also am interested to know how a mechanical joint will work.
Have fun.

Hal AA2ID

-----Original Message-----

From: redsp <gnuarm.2006@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Sun, Jan 27, 2013 10:05 pm
Subject: [loopantennas] Re: Soldered vs unsoldered joints

If we are talking about resistance, I'm not sure it is that simple. The skin effect should behave differently on a flat strip than on a round tube. I think the tube will be a better geometry, but the strip will likely be thinner and so not as subject to the skin effect, depending on the frequency vs. the thickness. How thick is a copper strip? Or, how long is a piece of string?

As to the loop inductance, I don't think that will be significantly different from a pipe. In fact, the first formulas for inductance assume the coils are infinitely flat strips of conductor with infinitely narrow gaps between windings, hence the terms "sheet" inductance. All of the current flows in a sheet describing the coil. They have to make messy adjustments to the formulas to compensate for the geometry of "real" wires and tubing.

Is this really a practical approach? How many times can a copper sheet be bent before it creases and cracks?

Rick

--- In loopantennas@yahoogroups.com, Don wrote:
>
> Is it not 3.141 x the diameter?
>
> Don KPC6NDB
> Upland, CA
> 34.10 -117.63 1250ft
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> PA0RDT Mini-Whip x2 @ 25ft
> RYO Active Antenna @ 25ft

> LFL1010 ALA100L x2
>
> On 27-Jan-13 18:17, kd0qnm wrote:
> > Copper flashing -- what a great idea Todd.
> >
> > Anyone know what the exact conversion from strip to tube diameter would be though? I would want to calculate out the required capacitance beforehand (so as to purchase the proper variable cap), and am not sure how to do so with a strip.
> >
> > 73, and tnx again.
> >
> > ~KD0QNM (Dan)

9661. Re: [loopantennas] Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-29 21:53:10 UTC
From: kevin asato
Topic: 9648 Message: 9661

How about 1/2" copper pipe?? you can sweat solder more critical areas (elbows, tees, misc fittings) together and still use the couplers to push together the loose ends using cotter pins or screws to hold the assembly together while in the air. I have used a battery post terminal cleaner to clean the inner and outer surfaces prior to soldering and such a device can be used prior to assembling the loop in the field. A side benefit is that copper pipe has less bulk than PVC and can be assembled and disassembled multiple times without worry about tearing. The detriment is that you are rather fixed to the possible geometries that can be fashioned but if square, rectangle, or octagon are possible forms, then this can be tried.

73,
kevin
kc6pob

From: Harold <aa2id@...>
To: loopantennas@yahoogroups.com
Sent: Tuesday, January 29, 2013 12:11 PM
Subject: Re: [loopantennas] Re: Soldered vs unsoldered joints

I'd go ahead and put it together un soldered. Let us know how it works out.

you can always go back and solder the Joints

I also am interested to know how a mechanical joint will work.
Have fun.

Hal AA2ID

-----Original Message-----
From: redsp <gnuarm.2006@...> To: loopantennas <loopantennas@yahoogroups.com> Sent: Sun, Jan 27, 2013 10:05 pm Subject: [loopantennas] Re: Soldered vs unsoldered joints

If we are talking about resistance, I'm not sure it is that simple. The skin effect should behave differently on a flat strip than on a round tube. I think the tube will be a better geometry, but the strip will likely be thinner and so not as subject to the skin effect, depending on the frequency vs. the thickness. How thick is a copper strip? Or, how long is a piece of string? As to the loop inductance, I don't think that will be significantly different from a pipe. In fact, the first formulas for inductance assume the coils are infinitely flat strips of conductor with infinitely narrow gaps between windings, hence the terms "sheet" inductance. All of the current flows in a sheet describing the coil. They have to make messy adjustments to the formulas to compensate for the geometry of "real" wires and tubing. Is this really a practical approach? How many times can a copper sheet be bent before it creases and cracks? Rick --- In mailto:loopantennas%40yahoogroups.com, Don wrote: > > Is it not 3.141 x the diameter? > > Don KPC6NDB > Upland, CA > 34.10 -117.63 1250ft > R-75 w/250Hz 2x R-71A w/250Hz R-70 > Perseus SDR-IQ FRG-100B SR-AF & LPF > DSP599zx MFJ-784B HD-1418 AF-1 MSB-1 > PA0RDT

Mini-Whip x2 @ 25ft > RYO Active Antenna @ 25ft > LFL1010 ALA100L x2 > > On 27-Jan-13 18:17, kd0qnm wrote: > > Copper flashing -- what a great idea Todd. > > > > Anyone know what the exact conversion from strip to tube diameter would be though? I would want to calculate out the required capacitance beforehand (so as to purchase the proper variable cap), and am not sure how to do so with a strip. > > > > 73, and tnx again. > > > > ~KD0QNM (Dan)

9662. Optimal load impedance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-29 19:27:07 UTC
From: ALEX
Topic: 9662 Message: 9662

I am trying to find out what the optimal load impedance for a small untuned loop or dipole is, but I could not find a definitive answer so far.

A simple equivalent circuit of a small antenna consists of a voltage source V, a resistance R_rad + R_loss + R_load, and a reactance j*X. This applies to both a small loop and a short dipole, even the values of the elements of this circuit are of the same order of magnitude for both antenna types, the only difference between a dipole and a loop is the sign of the reactance. It follows from this circuit that the maximum power is transferred from the antenna to the load when

R_load = SQRT((R_rad + R_loss)^2 + |X|^2)

Since (R_rad + R_loss) << X, the optimal R_load is approximately |X|, a value in the range of hundreds of Ohms for both a dipole and a loop.

Nevertheless, some sources [1],[2] suggest that the input impedance of an amplifier connected to a small loop must be as low as possible, other sources [3] report success with a small loop and a common collector amplifier (the input impedance is hundreds of Ohms), and finally it is recommended to use a short dipole with a high input impedance amplifier [4]. Why so? Can anyone explain the discrepancy between the theory and practical recommendations? The loss of the received signal power could be huge due to the load impedance mismatch, nevertheless the recommended values vary by 6 orders of magnitude!

73 Alex VE3NEA

References

[1] http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm

[2] http://www.home.earthlink.net/~christrask/Wideband%20Loop%20Antenna%20Amplifier.pdf

[3] http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html

[4] http://www.home.earthlink.net/~christrask/Complementary%20Push-Pull%20Amplifiers.pdf

9663. Re: [loopantennas] Optimal load impedance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-30 12:47:36 UTC
From: Jack Smith
Topic: 9662 Message: 9663

You are not necessarily trying to transfer maximum power and hence conjugate matching may not be appropriate. (it provides 50% loss, after all)

Also remember that for a small loop, the induced voltage increases with frequency since it's a function of dB/dt where B is the magnetic field. Hence you have a 6 dB / octave rising characteristic for induced voltage. If the loop operates into a low Z amplifier, the voltage divider formed by the loop inductive reactance and the the amplifier input impedance have a -6 dB/octave response that cancels the rising response. Hence you can have a flat response in terms of incident field versus loop amplifier output.

Jack

On 1/29/2013 2:27 PM, ALEX wrote:
>
> I am trying to find out what the optimal load impedance for a small
> untuned loop or dipole is, but I could not find a definitive answer so
> far.
>
> A simple equivalent circuit of a small antenna consists of a voltage
> source V, a resistance R_rad + R_loss + R_load, and a reactance j*X.
> This applies to both a small loop and a short dipole, even the values
> of the elements of this circuit are of the same order of magnitude for
> both antenna types, the only difference between a dipole and a loop is
> the sign of the reactance. It follows from this circuit that the
> maximum power is transferred from the antenna to the load when
>
> R_load = SQRT((R_rad + R_loss)^2 + |X|^2)
>
> Since (R_rad + R_loss) << X, the optimal R_load is approximately |X|,
> a value in the range of hundreds of Ohms for both a dipole and a loop.
>
> Nevertheless, some sources [1],[2] suggest that the input impedance of
> an amplifier connected to a small loop must be as low as possible,
> other sources [3] report success with a small loop and a common
> collector amplifier (the input impedance is hundreds of Ohms), and
> finally it is recommended to use a short dipole with a high input
> impedance amplifier [4]. Why so? Can anyone explain the discrepancy
> between the theory and practical recommendations? The loss of the
> received signal power could be huge due to the load impedance
> mismatch, nevertheless the recommended values vary by 6 orders of
> magnitude!
>
> 73 Alex VE3NEA

>
> References
>
> [1]
> http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
>
> [2]
> http://www.home.earthlink.net/~christrask/Wideband%20Loop%20Antenna%20Amplifier.pdf
> <http://www.home.earthlink.net/%7Echristrask/Wideband%20Loop%20Antenna%20Amplifier.pdf>
>
> [3] http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html
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> [4]
> http://www.home.earthlink.net/~christrask/Complementary%20Push-Pull%20Amplifiers.pdf
> <http://www.home.earthlink.net/%7Echristrask/Complementary%20Push-Pull%20Amplifiers.pdf>
>
>

9664. Re: [loopantennas] Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-30 16:07:25 UTC
From: g.preston@...
Topic: 9648 Message: 9664

I'm from the electric power industry and getting a low resistance connection to aluminum conductors is a challenge. To splice two consuctions that might be an inch in diameter, there is a long tube that is slipped over both ends and the full length is crimped several time to get a good mechanical and electical contact with a lot of surface area in contact. If you had bolted copper conductors you would have to have a lot of surface area in contact under high pressure and also sealed with some kind of conductive coating between the bolted connections so that corrosion would not set in. Its easier to just have soldered connections with a lot of surface contact area.

My question is, where are you going to find a variable capacitor that has low enough resistance on its contacts even when it is soldered?

73 de k5gp gene

At 02:11 PM 1/29/2013, you wrote:

>I'd go ahead and put it together un soldered.
>Let us know how it works out.
>you can always go back and solder the Joints
>I also am interested to know how a mechanical joint will work.
>Have fun.
>
>Hal AA2ID
>
>
>
>
>
>-----Original Message-----
>From: redsp <gnuarm.2006@...>
>To: loopantennas <loopantennas@yahoogroups.com>
>Sent: Sun, Jan 27, 2013 10:05 pm
>Subject: [loopantennas] Re: Soldered vs unsoldered joints
>
>
>If we are talking about resistance, I'm not sure it is that simple.
>The skin effect should behave differently on a flat strip than on a
>round tube. I think the tube will be a better geometry, but the
>strip will likely be thinner and so not as subject to the skin
>effect, depending on the frequency vs. the thickness. How thick is a
>copper strip? Or, how long is a piece of string?
>
>As to the loop inductance, I don't think that will be significantly
>different from a pipe. In fact, the first formulas for inductance

>assume the coils are infinitely flat strips of conductor with
>infinitely narrow gaps between windings, hence the terms "sheet"
>inductance. All of the current flows in a sheet describing the coil.
>They have to make messy adjustments to the formulas to compensate
>for the geometry of "real" wires and tubing.
>
>Is this really a practical approach? How many times can a copper
>sheet be bent before it creases and cracks?
>
>Rick
>
>--- In
><mailto:loopantennas%40yahoogroups.com>loopantennas@yahoogroups.com, Don wrote:
> >
> > Is it not 3.141 x the diameter?
> >
> > Don KPC6NDB
> > Upland, CA
> > 34.10 -117.63 1250ft
> > R-75 w/250Hz 2x R-71A w/250Hz R-70
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> > PA0RDT Mini-Whip x2 @ 25ft
> > RYO Active Antenna @ 25ft
> > LFL1010 ALA100L x2
> >
> > On 27-Jan-13 18:17, kd0qnm wrote:
> > > Copper flashing -- what a great idea Todd.
> > >
> > > Anyone know what the exact conversion from strip to tube
> diameter would be though? I would want to calculate out the
> required capacitance beforehand (so as to purchase the proper
> variable cap), and am not sure how to do so with a strip.
> > >
> > > 73, and tnx again.
> > >
> > > ~KD0QNM (Dan)
>
>
>
>

9665. Re: [loopantennas] Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-30 18:36:07 UTC
From: toddroberts2001@...
Topic: 9648 Message: 9665

Hi Gene, thanks for your insights into some of the problems of trying to get a low-resistance connection between two pieces of metal without soldering or brazing.

Most people don't seem to understand that a low-resistance connection is very hard to achieve using bolt-on or clamp-on connections. That is why it is always recommended to solder all joints and connections in a copper transmitting loop. The radiation resistance of a transmitting loop is usually measured in milliohms, not ohms, so even a few milliohms of resistance in a joint can destroy the efficiency of a transmitting loop antenna.

For example if someone used even only a few inches of #12 wire to connect a variable capacitor to a loop, there would actually be more RF resistance in that short length of #12 wire than in the whole loop element. One rule of thumb that helps me is : if it doesn't look heavy enough to start a car with, forget it. No one would expect to be able to start a car with a piece of #12 wire. The wire would turn smoking hot, which is what I have seen with an actual transmitting loop running 100 watts of power when I tried to use a short piece of #12 wire for a connection to a capacitor. The current in a transmitting loop can approach 100 amperes or more running amateur power levels.

The best article I have seen on building a truly low-resistance variable capacitor for a transmitting loop is called "A Homebrew Loop Tuning Capacitor" by Bill Jones, KD7S. This article was in the November 1994 issue of QST magazine. A pdf copy is available for download free if you are an ARRL member.

The article describes building a "Trombone style" variable capacitor using part of the transmitting loop as one section of the capacitor and a U-Shaped section of copper tubing that slides in and out of the tubing ends of the transmitting loop using a motor and threaded rod for slow smooth tuning. The elements of the

capacitor are insulated from each other using high-quality Teflon or similar
plastic sheet rolled up over the inner set of tubing. Teflon sheet is one of the best
insulators known and will withstand much higher voltages than trying to use air-spacing
of the capacitor elements. The article has clear drawings and a clear explanation of how
it works.

I have built several successful transmitting loops using his design.

73 - Todd WD4NGG

In a message dated 1/30/2013 11:07:32 A.M. Eastern Standard Time,
g.preston@... writes:

I'm from the electric power industry and getting a low resistance
connection to aluminum conductors is a challenge. To splice two consuctions that
might be an inch in diameter, there is a long tube that is slipped over both
ends and the full length is crimped several time to get a good mechanical
and electical contact with a lot of surface area in contact. If you had
bolted copper conductors you would have to have a lot of surface area in
contact under high pressure and also sealed with some kind of conductive coating
between the bolted connections so that corrosion would not set in. Its
easier to just have soldered connections with a lot of surface contact area.

My question is, where are you going to find a variable capacitor that has
low enough resistance on its contacts even when it is soldered?

73 de k5gp gene

9666. Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-30 15:18:46 UTC
From: Steve
Topic: 9666 Message: 9666

Hi folks - new to the group!

I'm thinking of building the varactor tuned loop from Christ Trask's paper "A Simple Varactor-Tuned Loop Antenna Matching Network" in the Files section.

I have a couple of questions:

1) Is there any reason not to use a couple of 1SV149 diodes in place of the MVAM109s? The 1SV149s seem to be more readily available!

2) Is there any need to take special precautions if the loop is positioned say, 20ft, from a Tx antenna at a power level of 400W?

Thanks,
Steve

9667. Re: [loopantennas] Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-31 04:09:24 UTC
From: Richard (Rick) Karlquist
Topic: 9666 Message: 9667

You might also want to consider the "NCJ loop antenna" in the files section. It is even "simpler" (1 transformer vs 3 transformers, and it is inherently decoupled from the feed line.) Also available at this URL:

http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

I recently worked VK6 and CE1 on 160 meters listening with this loop, and they were Q5 copy without a preamp on my FT1000.

Where are 1SV149's "readily available"? They should work fine AFAIK.

A loop 20 feet from a TX antenna, when not transmitting, is likely to have a very poor pattern due to the proximity of the TX antenna unless you go to a lot of trouble to detune it during RX.
When transmitting, you have to worry about blowing up your receiver from all the RF that will be picked up.

Rick N6RK

On 1/30/2013 7:18 AM, Steve wrote:
> Hi folks - new to the group!
> I'm thinking of building the varactor tuned loop from Christ Trask's
> paper "A Simple Varactor-Tuned Loop Antenna Matching Network" in the
> Files section.
>
> I have a couple of questions:
>
> 1) Is there any reason not to use a couple of 1SV149 diodes in place of
> the MVAM109s? The 1SV149s seem to be more readily available!
>
> 2) Is there any need to take special precautions if the loop is
> positioned say, 20ft, from a Tx antenna at a power level of 400W?
>
> Thanks,
> Steve
>
>

9668. Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-31 04:41:32 UTC
From: jpopelish
Topic: 9666 Message: 9668

--- In loopantennas@yahoogroups.com, "Steve" wrote:
>
> Hi folks - new to the group!
>
> I'm thinking of building the varactor tuned loop from Christ Trask's paper "A Simple Varactor-Tuned Loop Antenna Matching Network" in the Files section.
>
> I have a couple of questions:
>
> 1) Is there any reason not to use a couple of 1SV149 diodes in place of the MVAM109s? The 1SV149s seem to be more readily available!
(snip)

Now I feel bad for buying 10 MVAM109s, off ebay, just because they were cheap, not because I needed them for anything. How many do you need?

--
Regards,

John Popelish

9669. Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-31 08:21:09 UTC
From: Vojtech
Topic: 9666 Message: 9669

Hi,

I am experimenting with receiving loops since last fall to be used on my business trips. Therefore the loops shall be transportable and immune to noise if used indoors or on the balcony. I built the varactor matching circuit by Chris Trask, but it did not fulfill the expectations. The matching was good at 80m, reasonable at 40m, but marginal at 30m and outright poor at 20m.

I am going to try the matching circuit described by N6RK. I measured two transformers wound with 5t:50t on a FT50-61 Amidon core yesterday, connected back to back at the high impedance side. The losses are 0.2dB per single transformer from 40m to 20m. At 80m, the transformer has a little bit low impedance, but as N6RK comments in his article, the impedance is absorbed by the loop tank. Above 20m, the losses are growing, but still very respectable for a receiving circuit.

Actually the losses of the Amidon 61 ferrite material are so low, that I am considering using it for a QRP transmitting loop. I guess a bit bigger core than size 50 has to be used, not because of heating, but because of high voltage strain.

73, Vojtech OK1IAK, AB2ZA

9670. Re: Optimal load impedance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-31 12:01:45 UTC
From: Vojtech
Topic: 9662 Message: 9670

Alex,

> Since (R_rad + R_loss) << X, the optimal R_load is approximately |X|, a value in the range of hundreds of Ohms for both a dipole and a loop.

Both small loop antenna and small dipole antenna, if built efficiently are of very high Q. That means a narrow band matching circuit in case of efficient power transfer.

> Nevertheless, some sources [1],[2] suggest that the input impedance of an amplifier connected to a small loop must be as low as possible

If the loading impedance is high, the loop starts acting as a dipole, which distorts the figure eight vertical radiation pattern and decreases immunity to a near E-field.

> other sources [3] report success with a small loop and a common collector amplifier (the input impedance is hundreds of Ohms),

Depends on what do you want to optimize. I recommend reading the following article from Chevdar LZ1AQ (thanks, Chevdar):
http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
I recommmend to read all his technical articles anyway. It is a great source of technical and theoretic information on loops.

Basically, the higher the load impedance, the better the SNR, but the higher the lower frequency threshold, worse radiation diagram and more sensitive to E-field. The null depths and low sensitivity to E-field are the reason to install the loop antenna in city environment, therefore keeping the load resistance low is important.

> and finally it is recommended to use a short dipole with a high
input impedance amplifier [4].

That is a completely different kind of animal altogether. Chevdar's active antenna amplifier could be switched to magnetic or electric field mode. He comments, that in the E-field mode the antenna has a better SNR in a rural environment, but is more sensitive to close e-field noise than the mag loop mode.

> The loss of the received signal power could be huge due to the load impedance mismatch.

Chevdar compares SNR of a tuned loop against an untuned loop. The SNR of a tuned loop is better indeed because of conjugate matching. The noise of a tuned loop is mainly caused by the thermal noise of the loop resistance. The noise of an untuned loop caused mainly by the thermal noise of the load resistance.

73, Vojtech OK1IAK, AB2ZA

9671. Re: [loopantennas] Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-31 12:54:49 UTC
From: Chris Trask
Topic: 9666 Message: 9671

>
>Hi folks - new to the group!
>
>I'm thinking of building the varactor tuned loop from Christ Trask's paper "A Simple Varactor-Tuned Loop Antenna Matching Network" in the Files section.
>
>I have a couple of questions:
>
>1) Is there any reason not to use a couple of 1SV149 diodes in place of the MVAM109s? The 1SV149s seem
> to be more readily available!
>

No reason why not, but your tuning bandwidth will be different than that of the original design.

>
>2) Is there any need to take special precautions if the loop is positioned say, 20ft, from a Tx antenna
> at a power level of 400W?
>

I would suggest adding an SPST relay across the first transformer on the varactor side, closing the contacts when transmitting. That much power at that distance could possibly damage the varactors.

Chris

9672. Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-01-31 19:52:40 UTC
From: Steve
Topic: 9666 Message: 9672

My thanks to everyone who responded"

As a footnote, a packet of 1SV149s arrived today, they and appear to be working fine. I have implemented Chris' idea of a relay for protection - it is driven from my station T/R line.

Thanks again.
Steve

9673. Re: [loopantennas] Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-01 03:49:22 UTC
From: Richard (Rick) Karlquist
Topic: 9666 Message: 9673

On 1/31/2013 11:52 AM, Steve wrote:
> My thanks to everyone who responded"
>
> As a footnote, a packet of 1SV149s arrived today, they and appear to be
> working fine. I have implemented Chris' idea of a relay for protection -

Please, where did you buy the 1SV149's?

Rick N6RK

9674. Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-01 11:27:12 UTC
From: Steve
Topic: 9666 Message: 9674

I bought here:
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=121036971493&ssPageName=ADME:L:OC:GB:3160

Steve

--- In loopantennas@yahoogroups.com, "Richard (Rick) Karlquist" wrote:

>
> Please, where did you buy the 1SV149's?
>
> Rick N6RK
>

9675. Re: [loopantennas] Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-01 12:54:22 UTC
From: Chris Trask
Topic: 9666 Message: 9675

```
>
>I bought here:
>http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=121036971493&ssPageName=ADME:L:OC:GB
:3160
>

That is exceptionally cheap.

Chris
```

9676. Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-01 13:21:14 UTC
From: Steve
Topic: 9666 Message: 9676

Really?

10 for $2.99 here:
http://www.ebay.co.uk/itm/10pcs-1SV149-ISV149-1SV-149-Varicap-Varactor-diodes-NEW-/200609638692?pt=LH_DefaultDomain_0&hash=item2eb5442924

Regards,
Steve

--- In loopantennas@yahoogroups.com, Chris Trask wrote:
>
> That is exceptionally cheap.
>
> Chris
>

9677. MFJ Hi Q Loop (MFJ-1786)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-01 11:26:20 UTC
From: the_dalcassian
Topic: 9677 Message: 9677

I have just put up (Temp) my MFJ Hi Q Loop antenna at 6m above the ground mounted Horizontally polarised. I am having great RX/TX with this Antenna. I intend to permanently fix it at 12M above the ground Horizontally polarised.

I would like advise on extending the centr Aluminium pole by 300mm to take a 6M/2m/70cm Vertical Antenna, has anyone done this, will it detrimentally affect the swr on the Hi Q loop. perhaps I could extend by a Plastic pole then add the VHF vertical????

Any ideas on this proposal

Kind Regards Rodger (G8HLH).

9678. Re: [loopantennas] Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-01 14:05:35 UTC
From: Chris Trask
Topic: 9666 Message: 9678

```
>
>>
>> That is exceptionally cheap.
>>
>
>Really?
>
>10 for $2.99 here:
>http://www.ebay.co.uk/itm/10pcs-1SV149-ISV149-1SV-149-Varicap-Varactor-diodes-NEW-/200609
638692?pt=LH_DefaultDomain_0&hash=item2eb5442924
>
```

I was thinking with regard to the NTE equivalent. This price is amazing. Didn't think that we would ever see affordable varactors of this range in a leaded package ever again. Certainly glad that this discussion came up as I can now look at other designs and not cringe at the cost of the varactors.

Chris

Chris

9679. Re: Varactor tuned loop questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-01 16:17:10 UTC
From: Steve
Topic: 9666 Message: 9679

@ Chris,

Slightly OT, but I thought I might also try your loop amplifier in a wideband design! I'm struggling to find the MPS6521; would the BC550C be a suitable replacement?

Also, I see no value for C18 in the schematic, but two figures given for C15; I presume C18 is the 47uF and C15 100nF?

Thanks,
Steve

9680. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-02 03:57:01 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 9680

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

9681. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-02 03:57:01 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 9681

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

9682. Tuned loop better than untuned? How to match, what amplifier to use?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-03 10:20:30 UTC
From: Vojtech
Topic: 9682 Message: 9682

Hello.

I studied the theory and experiments collected by Chavdar LZ1AQ carefuly. Chavdar concluded, that for a loop with diameter smaller tham 1m, the loading resistor of the transimpedance amplifier produces higher thermal noise than a background noise at higher HF HAM bands at quiet locations. He compared his untuned loop with a tuned loop of the same size at rural location experimentally and concluded that the tuned loop provides clearly better signal over noise. An untuned loop has a clear operating advantage, but in theory the tuned loop may be frequency calibrated and tuned in response to a transceiver frequency output at a CAT interface the same way the automatic band switching of transceiver accessories works.

I wonder whether matching a resonated loop with a balanced JFET high impedance source follower is a good design choice as there is a rumor that such an amplifier is prone to electric imbalance of the loop, which makes the loop act as an active monopole. Rick K6RK in his paper "An Improved Feed Network for Loop-Type Receiving Antennas" describes high impedance matching of a resonated loop by a transformer on an Amidon ferrite material 61 toroidal core. I measured two of these transformers back to back and the losses are very low indeed, which makes me thinking of using a W7IUV 20dB preamp just after the transformer to bring the loop signal power up to the normal levels. Is it a good idea, or will the JFET source follower work better?

Chavdar LZ1AQ loop experiments:
http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm

W7IUV preamp:
http://w7iuv.com/preamp60/preamp_r60.pdf

K6RK receiving loop:
http://www.ok1rr.com/index.php/antennas/66-the-n6rk-receiving-loop

73, Vojtech OK1IAK

9683. Re: [loopantennas] Tuned loop better than untuned? How to match, what amplifier to use?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-03 18:29:14 UTC
From: Richard (Rick) Karlquist
Topic: 9682 Message: 9683

On 2/3/2013 2:20 AM, Vojtech wrote:

> I wonder whether matching a resonated loop with a balanced JFET high
> impedance source follower is a good design choice as there is a rumor
> that such an amplifier is prone to electric imbalance of the loop, which
> makes the loop act as an active monopole. Rick K6RK in his paper "An
> Improved Feed Network for Loop-Type Receiving Antennas" describes high
> impedance matching of a resonated loop by a transformer on an Amidon
> ferrite material 61 toroidal core. I measured two of these transformers
> back to back and the losses are very low indeed, which makes me thinking
> of using a W7IUV 20dB preamp just after the transformer to bring the
> loop signal power up to the normal levels. Is it a good idea, or will
> the JFET source follower work better?

My experience with the NCJ loop is that no preamp is needed beyond the built in preamp in the radio. The loop as described in NCJ has more noise output than the noise floor of my Yaesu FT1000. The matching network described transforms ohmic losses in the coax to 50 ohms at the output connector. The effective noise temperature is therefore room temperature (300K). If you want to use a preamp, it can just be a conventional 50 ohm amplifier, where it is easy to get a NF of a few dB. Alternately, you can double the size of the loop and pick up about 9 dB, but it will now be 160 meters only.

Bring "the loop signal power up to the normal levels" will not increase the sensitivity if the external noise already is dominating. It will make the AGC perform better. My QTH is only 6 miles from a 50 kW BCB station, so I avoid preamps, and if I do use them, I have to preceed them by a high pass BCB reject filter.

Rick N6RK

9684. BUTTERFLY CAPACITOR

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-06 04:59:14 UTC
From: pop
Topic: 9684 Message: 9684

2.5-15KV BUTTERFLY CAPACITOR KITS for sale

http://www.flickr.com/photos/93005502@N08/page3/

www.youtube.com/watch?v=dmZxgmalP9g

3" OD ROTOR
4" OD ROTOR
5" OD ROTOR
6" OD ROTOR
8" OD ROTOR

VA6POP
yo5bzz(at)gmail.com

9685. 2.5-15KV BUTTERFLY CAPACITOR KITS for sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-05 21:11:36 UTC
From: pop
Topic: 9685 Message: 9685

2.5-15KV BUTTERFLY CAPACITOR KITS for sale

www.youtube.com/watch?v=dmZxgmalP9g

3" OD ROTOR
4" OD ROTOR
5" OD ROTOR
6" OD ROTOR
8" OD ROTOR

VA6POP
yo5bzz@...

http://forums.qrz.com/showthread.php?378701-2-5-15kv-butterfly-capacitor-kits&p=2764980#post2764980

http://groups.yahoo.com/group/loopantennas/photos/album/1355109643/pic/list

http://groups.yahoo.com/group/loopantennas/photos/album/1356390600/pic/list

9686. good bye, litz wire?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-06 10:33:55 UTC
From: ceo@andygardner.com
Topic: 9686 Message: 9686

http://www.theregister.co.uk/2013/01/14/carbon_nanotube_threads_spun/

Discuss...

9687. Re: [loopantennas] Re: Soldered vs unsoldered joints

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-06 13:07:49 UTC
From: Qrp Gaijin
Topic: 9648 Message: 9687

Forgive the belated response, but:

On 27-Jan-13 18:17, kd0qnm wrote:
>> > Copper flashing -- what a great idea Todd.
>> >
>> > Anyone know what the exact conversion from strip to tube diameter would be though?

On Sun, Jan 27, 2013 7:05 PM PST redsp wrote:

>If we are talking about resistance, I'm not sure it is that simple. The skin effect should behave differently on a flat strip than on a round tube.

Yes, very much so. The equivalent-diameter cylindrical-cross-section conductor corresponding to a flat, rectangular-cross-section conductor cannot be computed simply by taking the diameter of the cylinder formed by rolling the flat conductor into a tube.

I wrote a lengthy post on this subject for another forum. See here for details on how to compute the equivalent-tubing-diameter of flat conductors:
http://www.eham.net/ehamforum/smf/index.php/topic,86102.msg630653.html#msg630653

The brief summary is to read and understand everything W9CF has written on the subject, then use his approximations to compute an equivalent-resistance diameter and an equivalent-inductance diameter, and use those values to compute the small loop efficiency (explained in the above link).

9688. Re: Tuned loop better than untuned? How to match, what amplifier to use?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-08 08:28:58 UTC
From: Vojtech
Topic: 9682 Message: 9688

Hello Rick.

> My experience with the NCJ loop is that no preamp is needed beyond
> the built in preamp in the radio. The loop as described in NCJ has
> more noise output than the noise floor of my Yaesu FT1000.

I am doing an exercise in simplicity. Currently the only HAM HF transceiver in house is a tiny kit fitted in the Altoids tin - the ATS-3b by KD1JV. The receiver is a common 2x SA612 based superhetodyne. I matched a 37cm diameter loop wound with 1cm diameter aluminium tube to 50 Ohm coax using a transformer wound with 50t:3t on FT50-61 toroid core. The matching was verified with a VNA, matched impedance is around 40 Ohm on 40m, 80 Ohm on 20m, those are my primary bands of interest. Because the original band pass filters of the radio kit are lossy, I fitted the radio with a replacement bandpass filter with single resonated transformer wound on a FT37-6 core, matching the input 50 Ohm to the 1.5 kOhm input impedance of the SA612. This is my 2nd prototype, the first matching circuit just connected the loop to the input of the SA612 with a 4:1 Guanella transformer wound on FT50-43. The 4:1 matching provides a bit stronger signal, but I am sticking to the solution with the 50 Ohm coax and the 2nd resonator to ease the strain on the SA612. Yes, I know the theory sais the Guanella transformer will be lossy at high impedances because the transmission line impedance is low, but it works quite well in my situation.

I am doing this exercise as a learning oportunity and to have a portable receiving equipment for hotel stays. The loop has to fit into my backpack and has to be small enough to be easy to rotate and to fit on the window sill. The loop with the simple matching circuit to the SA612 performs reasonably at the outskirt of Prague, where the power line noise is very strong. I am able to significantly reduce the powerline noise by positioning the loop parallel to the powerline direction. The loop noise over receiver noise on 40m is quite marginal though and I will have to do more tests in the radio quite environment to asses whether the SA612 will provide enough amplification and be quiet enough to bring the background noise over the receiver noise. If not, then either an external amplifier or bigger loop will help, but I would rather avoid the 2nd.

My original question really was, what amplifier and amplification levels one really needs for such a tiny loop to overcome receiver noise (receiver without preamp) and whether it is better to amplify at low impedances or at the high impedances with the FET followers. I think I will have to try both.

To fit a bigger loop into a backpack means likely to build a wooden cross and using a coax for the loop, but then it would be difficult to rotate indoors and the symmetry will be compromised meaning worse chance to null out indoor noise.

With the 1 foot dmr loop on the windowsill with no preamp I hear NZ, US and JA stations on 40 and 20m regularly, so the loop certainly works.

73, Vojtech OK1IAK

9689. Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-08 12:56:32 UTC
From: legitfromtheman
Topic: 9689 Message: 9689

Hello all,

I'm trying to buy all the parts needed to construct a carpet loop antenna as detailed:

http://f1.grp.yahoofs.com/v1/wOgUUWnH9vKjFDclXVfcy6nit1FVR-wxQXaamHyYZxkvnqIVpHFCsFuOnswa46vzcaDBqmU1tEPuuLknUeadDROTyh87MDtINq92Jf9B/carpetloop.pdf

The only part I cannot find is a 365pf variable capacitor. I can however find a variety of other capacitors, the easiest to source being one with a range of 0-200pf.

Can anyone tell me if a 200pf capacitor can be used for shortwave listening or do I need a capacitor as close to 365pF as possible? I am unsure what the different ranges on offer actually mean in reality. Does it equate to better fine tuning or would a smaller capacitor give a shorter tuning range?

9690. Re: Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-08 15:07:48 UTC
From: AlienRelics
Topic: 9689 Message: 9690

Yahoogroups does those weird long links to prevent outsite sites from leeching bandwidth. So within 30 minutes of getting that link, it does not work.

The secret is to go to the File folder that the PDF is in, copy-paste that link: http://groups.yahoo.com/group/loopantennas/files/

Then append the name of the file: carpetloop.pdf

http://groups.yahoo.com/group/loopantennas/files/carpetloop.pdf

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, "legitfromtheman" wrote:
>
> Hello all,
>
> I'm trying to buy all the parts needed to construct a carpet loop antenna as detailed:
>
> http://f1.grp.yahoofs.com/v1/wOgUUWnH9vKjFDclXVfcy6nit1FVR-wxQXaamHyYZxkvnqIVpHFCsFuOnsw
a46vzcaDBqmU1tEPuuLknUeadDROTyh87MDtINq92Jf9B/carpetloop.pdf
>
>
> The only part I cannot find is a 365pf variable capacitor. I can however find a variety
of other capacitors, the easiest to source being one with a range of 0-200pf.
>
> Can anyone tell me if a 200pf capacitor can be used for shortwave listening or do I need
a capacitor as close to 365pF as possible? I am unsure what the different ranges on offer
actually mean in reality. Does it equate to better fine tuning or would a smaller capacitor
give a shorter tuning range?
>

9691. Re: [loopantennas] Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-08 16:47:23 UTC
From: Don
Topic: 9689 Message: 9691

There are lots of them on eBay. Most old tube radios will have the type of capacitor you want. Look at the photo's on eBay to get an idea of what they look like.

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FRG-100B SR-AF & LPF
DSP599zx MFJ-784B HD-1418 AF-1 MSB-1
PA0RDT Mini-Whip x2 @ 25ft
RYO Active Antenna @ 25ft
LFL1010 ALA100L x2

On 08-Feb-13 04:56, legitfromtheman wrote:
> Hello all,
>
> I'm trying to buy all the parts needed to construct a carpet loop antenna as detailed:
>
> http://f1.grp.yahoofs.com/v1/wOgUUWnH9vKjFDclXVfcy6nit1FVR-wxQXaamHyYZxkvnqIVpHFCsFuOnsw a46vzcaDBqmU1tEPuuLknUeadDROTyh87MDtINq92Jf9B/carpetloop.pdf
>
>
> The only part I cannot find is a 365pf variable capacitor. I can however find a variety of other capacitors, the easiest to source being one with a range of 0-200pf.
>
> Can anyone tell me if a 200pf capacitor can be used for shortwave listening or do I need a capacitor as close to 365pF as possible? I am unsure what the different ranges on offer actually mean in reality. Does it equate to better fine tuning or would a smaller capacitor give a shorter tuning range?
>
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.

> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>
>
>
> -----
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.2897 / Virus Database: 2639/6079 - Release Date: 02/03/13
>
>

9692. Re: [loopantennas] Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-08 17:28:42 UTC
From: Stacy Williams
Topic: 9689 Message: 9692

Hello:)

What would work was to connect a say 75pf capacitor in parallel to the 200pf you have mentioned. Then you could even have a switch to use the extra 75 when needed. This would work for short wave listening no problems. You could even try copper tape around your skirting boards!

Good luck & 73
m0wsa
Stacy

Spooky action at a distance.....
On Feb 8, 2013 3:03 PM, "legitfromtheman" <legitfromtheman@...> wrote:

> **
>
>
> Hello all,
>
> I'm trying to buy all the parts needed to construct a carpet loop antenna
> as detailed:
>
>
> http://f1.grp.yahoofs.com/v1/wOgUUWnH9vKjFDclXVfcy6nit1FVR-wxQXaamHyYZxkvnqIVpHFCsFuOnsw
a46vzcaDBqmU1tEPuuLknUeadDROTyh87MDtINq92Jf9B/carpetloop.pdf
>
> The only part I cannot find is a 365pf variable capacitor. I can however
> find a variety of other capacitors, the easiest to source being one with a
> range of 0-200pf.
>
> Can anyone tell me if a 200pf capacitor can be used for shortwave
> listening or do I need a capacitor as close to 365pF as possible? I am
> unsure what the different ranges on offer actually mean in reality. Does it
> equate to better fine tuning or would a smaller capacitor give a shorter
> tuning range?
>
>
>

9693. Re: [loopantennas] Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-09 01:16:20 UTC
From: Sam Morgan
Topic: 9689 Message: 9693

http://midnightscience.com/catalog5.html

On 2/8/2013 6:56 AM, legitfromtheman wrote:
> Hello all,
>
> I'm trying to buy all the parts needed to construct a carpet loop antenna as
> detailed:
>
> http://f1.grp.yahoofs.com/v1/wOgUUWnH9vKjFDclXVfcy6nit1FVR-wxQXaamHyYZxkvnqIVpHFCsFuOnsw
a46vzcaDBqmU1tEPuuLknUeadDROTyh87MDtINq92Jf9B/carpetloop.pdf
>
>
>
> The only part I cannot find is a 365pf variable capacitor. I can however find
> a variety of other capacitors, the easiest to source being one with a range
> of 0-200pf.
>
> Can anyone tell me if a 200pf capacitor can be used for shortwave listening
> or do I need a capacitor as close to 365pF as possible? I am unsure what the
> different ranges on offer actually mean in reality. Does it equate to better
> fine tuning or would a smaller capacitor give a shorter tuning range?
>

--

GB & 73
K5OAI
Sam Morgan

9694. Re: Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-09 01:59:44 UTC
From: Ian Johnson
Topic: 9689 Message: 9694

Have a look at http://www.midnightscience.com under Radio Parts for the 365pF variable capacitor.

73

Ian Johnson
Brisbane Australia

9695. Re: [loopantennas] Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-09 10:05:42 UTC
From: John
Topic: 9689 Message: 9695

Give this URL a try http://www.flickr.com/photos/93005502@N08/

John.

On 8 February 2013 12:56, legitfromtheman <legitfromtheman@...> wrote:

> Hello all,
>
> I'm trying to buy all the parts needed to construct a carpet loop antenna
> as detailed:
>
>
> http://f1.grp.yahoofs.com/v1/wOgUUWnH9vKjFDclXVfcy6nit1FVR-wxQXaamHyYZxkvnqIVpHFCsFuOnsw
a46vzcaDBqmU1tEPuuLknUeadDROTyh87MDtINq92Jf9B/carpetloop.pdf
>
>
> The only part I cannot find is a 365pf variable capacitor. I can however
> find a variety of other capacitors, the easiest to source being one with a
> range of 0-200pf.
>
> Can anyone tell me if a 200pf capacitor can be used for shortwave
> listening or do I need a capacitor as close to 365pF as possible? I am
> unsure what the different ranges on offer actually mean in reality. Does it
> equate to better fine tuning or would a smaller capacitor give a shorter
> tuning range?
>
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>
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> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the
> Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF
> into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>

>

--
Windows 7 Home Premium.

Regards
John.

York North Yorkshire Locator IO93lw

Save Shortwave Radio.
http://www.mikeandsniffy.co.uk/UKQRM/

9696. Re: Capacitor for Carpet Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-10 13:26:49 UTC
From: legitfromtheman
Topic: 9689 Message: 9696

Many thanks for all your helpful responses. I will experiment with adding a few capacitors in parallel and see how that works.

Jim

9697. how deep are the loop minima

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-10 17:09:46 UTC
From: Vojtech
Topic: 9697 Message: 9697

Hello.

I measured the maximum and minimum band noise of my 1ft dmr loop standing on a window sill. I am living near a HV power line and the attenuation of the powerline noise when turned towards the noise source is in the ballpark of -10dB (-13dB if I am optimistic). Is this a usual value, or shall I strive to do better?

Thanks, Vojtech OK1IAK

9698. Re: [loopantennas] how deep are the loop minima

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-10 18:18:09 UTC
From: Andrew Ikin
Topic: 9697 Message: 9698

Vojtech wrote Feb 10.

I measured the maximum and minimum band noise of my 1ft dmr loop standing on a window sill. I am living near a HV power line and the attenuation of the powerline noise when turned towards the noise source is in the ballpark of -10dB (-13dB if I am optimistic). Is this a usual value, or shall I strive to do better?

Thanks, Vojtech OK1IAK

Dear Vojtech,

The null width of the loop is only a few degrees. Hence, as the noise source of the power-line is much wider than the loops null apperture then, is will be impossible to achieve a high null. Therefore a -10dB null is about right. Other factors that can affect the null is a lack of loop balance or poor isolation of the antenna to mains borne noise.

Kind regards

Andrew Ikin

9699. Re: [loopantennas] how deep are the loop minima

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-11 04:19:12 UTC
From: fernando talamantes
Topic: 9697 Message: 9699

Hi Vojtech: you must try at more distance from power lines. if u are living very close, you cant get a good null because the antenna is receiving noise transmited along the power line. the transmiter (power line) is not a puntual antenna and probably are receiving noise from angles different than the minimal rx .
73
Fernando XE2EJ

--- On Sun, 2/10/13, Vojtech <bubnikv@gmail.com> wrote:

From: Vojtech <bubnikv@...>
Subject: [loopantennas] how deep are the loop minima
To: loopantennas@yahoogroups.com
Date: Sunday, February 10, 2013, 9:09 AM

Hello.

I measured the maximum and minimum band noise of my 1ft dmr loop standing on a window sill. I am living near a HV power line and the attenuation of the powerline noise when turned towards the noise source is in the ballpark of -10dB (-13dB if I am optimistic). Is this a usual value, or shall I strive to do better?

Thanks, Vojtech OK1IAK

9700. Re: how deep are the loop minima

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-11 22:59:32 UTC
From: vbifyz
Topic: 9697 Message: 9700

You can also try and tilt the loop around the horizontal axis. This may give you few more dB. This is my actual observation.
Note that the orientation that gives maximum signal-to-noise is not necessary the same as the lowest noise, but it is usually pretty close.

73, Mike

--- In loopantennas@yahoogroups.com, fernando talamantes wrote:
>
> Hi Vojtech: you must try at more distance from power lines. if u are living very close, you cant get a good null because the antenna is receiving noise transmited along the power line. the transmiter (power line) is not a puntual antenna and probably are receiving noise from angles different than the minimal rx .
> 73
> Fernando XE2EJ
>
> --- On Sun, 2/10/13, Vojtech wrote:
>
>
> From: Vojtech
> Subject: [loopantennas] how deep are the loop minima
> To: loopantennas@yahoogroups.com
> Date: Sunday, February 10, 2013, 9:09 AM
>
>
>
> Â
>
>
>
> Hello.
>
> I measured the maximum and minimum band noise of my 1ft dmr loop standing on a window sill. I am living near a HV power line and the attenuation of the powerline noise when turned towards the noise source is in the ballpark of -10dB (-13dB if I am optimistic). Is this a usual value, or shall I strive to do better?
>
> Thanks, Vojtech OK1IAK
>

9701. 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-15 23:21:30 UTC
From: WilliamY
Topic: 9701 Message: 9701

Does anyone know where I can buy 30 feet of 660/46 Litz wire(solderable)?
It's available on ebay, but I would have to buy 60 feet or go outside of ebay to complete a transaction which I'm reluctant to do.

I want to build a two winding loop to plug into my existing rotateable loop antenna base so I can tune 1700 kHz to about 5,000 kHz.

Thanks. Bill Young WD5HOH

9702. Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-15 23:39:39 UTC
From: jpopelish
Topic: 9701 Message: 9702

--- In loopantennas@yahoogroups.com, "WilliamY" <lpwjy@...> wrote:
>
> Does anyone know where I can buy 30 feet of 660/46 Litz wire(solderable)?
> It's available on ebay, but I would have to buy 60 feet or go outside of ebay to complete a transaction which I'm reluctant to do.
>
> I want to build a two winding loop to plug into my existing rotateable loop antenna base so I can tune 1700 kHz to about 5,000 kHz.

There is an ebay auction for 60 feet of 330/46 litz. You could parallel a pair of these to make your antenna, for $20.

--
Regards,

John Popelish

9703. RE: [loopantennas] Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-16 05:18:38 UTC
From: William Young
Topic: 9701 Message: 9703

Thanks. I did something like that years ago with some medical hardware and it worked. And, also I have an idea how I can solder Litz wire: I have a 100 Watt soldering iron with a broad tip. What if I melt a small "pool" of solder on the tip of the iron and push the cut end of the Litz wire into the molten solder and then tin it for say a half inch while it's being heated more or less uniformly by molten solder? Bill Young WD5HOH
To: loopantennas@yahoogroups.com
From: jpopelish@...
Date: Fri, 15 Feb 2013 23:39:39 +0000
Subject: [loopantennas] Re: 660/46 Litz Wire Source

--- In loopantennas@yahoogroups.com, "WilliamY" wrote:

>

> Does anyone know where I can buy 30 feet of 660/46 Litz wire(solderable)?

> It's available on ebay, but I would have to buy 60 feet or go outside of ebay to complete a transaction which I'm reluctant to do.

>

> I want to build a two winding loop to plug into my existing rotateable loop antenna base so I can tune 1700 kHz to about 5,000 kHz.

There is an ebay auction for 60 feet of 330/46 litz. You could parallel a pair of these to make your antenna, for $20.

--

Regards,

John Popelish

9704. Re: [loopantennas] Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-16 16:29:09 UTC
From: Myamiphil
Topic: 9701 Message: 9704

Did you use medical ecg patient cables? I wanted to use some for a very short length needed for an rf antenna connection. I stripped it back and found the very soft and fine wire. I'm figuring it Litz. I tried to find specs on the cables but no go. I have no idea what the impedance is.. I'm guessing its 50 ohms.

I can get a few of these easily.. They are usually 10 ft lengths. So for any decent length needed for a loop it'll have to be soldered together to get the needed length.

Is this what you did?

Best Regards
Phil
Lat: 40.8367633 Long: -74.1768412

From: William Young <lpwjy@...>
To: Loop Antenna Group Yahoo <loopantennas@yahoogroups.com>
Sent: Saturday, February 16, 2013 12:18 AM
Subject: RE: [loopantennas] Re: 660/46 Litz Wire Source

Thanks. I did something like that years ago with some medical hardware and it worked. And, also I have an idea how I can solder Litz wire: I have a 100 Watt soldering iron with a broad tip. What if I melt a small "pool" of solder on the tip of the iron and push the cut end of the Litz wire into the molten solder and then tin it for say a half inch while it's being heated more or less uniformly by molten solder? Bill Young WD5HOH

To: loopantennas@yahoogroups.com
From: jpopelish@...
Date: Fri, 15 Feb 2013 23:39:39 +0000
Subject: [loopantennas] Re: 660/46 Litz Wire Source

--- In loopantennas@yahoogroups.com, "WilliamY" wrote:
>
> Does anyone know where I can buy 30 feet of 660/46 Litz wire(solderable)?
> It's available on ebay, but I would have to buy 60 feet or go outside of ebay to complete a transaction which I'm reluctant to do.
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There is an ebay auction for 60 feet of 330/46 litz. You could parallel a pair of these to make your antenna, for $20.

--
Regards,

John Popelish

9705. RE: [loopantennas] Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-16 18:48:52 UTC
From: William Young
Topic: 9701 Message: 9705

Phil, Some patient cables(at least this was true 30+ years ago) have graphite powder between the shield and the insulation around the center conductor. Some cable manufacturers claim the graphite reduces motion generated noise or "artifact". And the input impedance of a typical electrocardiogram(EKG or ECG) amplifier front end is no less than tens of megohms. And I won't guarantee that you can solder to the center conductor of a typical patient cable. Further I don't see why an EKG patient cable would be made with Litz wire. The EKG signal spectrum extends to a few thousand Hertz at most and the amplifier front end impedance is high. Skin effect is not a problem in that application. What I did years ago that's similar to what John suggested was to instruct a contractor to parallel another identical wire across an existing wire to get the impedance level between two points low enough to be within specification. Simple if you think about it but not immediately obvious. Bill Young WD5HOH To: loopantennas@yahoogroups.com
From: myamiphil@...
Date: Sat, 16 Feb 2013 08:29:09 -0800
Subject: Re: [loopantennas] Re: 660/46 Litz Wire Source

Did you use medical ecg patient cables? I wanted to use some for a very short length needed for an rf antenna connection. I stripped it back and found the very soft and fine wire. I'm figuring it Litz. I tried to find specs on the cables but no go. I have no idea what the impedance is.. I'm guessing its 50 ohms.
I can get a few of these easily.. They are usually 10 ft lengths. So for any decent length needed for a loop it'll have to be soldered together to get the needed length.
Is this what you did?

Best Regards
Phil
Lat: 40.8367633 Long: -74.1768412

From: William Young <lpwjy@...>
To: Loop Antenna Group Yahoo <loopantennas@yahoogroups.com>
Sent: Saturday, February 16, 2013 12:18 AM
Subject: RE: [loopantennas] Re: 660/46 Litz Wire Source

Thanks. I did something like that years ago with some medical hardware and it worked. And, also I have an idea how I can solder Litz wire: I have a 100 Watt soldering iron with a broad tip. What if I melt a small "pool" of solder on the tip of the iron and push the cut end of the Litz wire into the molten solder and then tin it for say a half inch while it's being heated more or less uniformly by molten solder? Bill Young WD5HOH

To: loopantennas@yahoogroups.com
From: jpopelish@...
Date: Fri, 15 Feb 2013 23:39:39 +0000
Subject: [loopantennas] Re: 660/46 Litz Wire Source

--- In loopantennas@yahoogroups.com, "WilliamY" wrote:

>

> Does anyone know where I can buy 30 feet of 660/46 Litz wire(solderable)?

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>

> I want to build a two winding loop to plug into my existing rotateable loop antenna base so I can tune 1700 kHz to about 5,000 kHz.

There is an ebay auction for 60 feet of 330/46 litz. You could parallel a pair of these to make your antenna, for $20.

--

Regards,

John Popelish

9706. Re: [loopantennas] Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-16 19:01:04 UTC
From: everettsharp@...
Topic: 9701 Message: 9706

Guys,

If you are wanting to buy Litz wire, I have used this guy for the last 3 years, Ming, he does sell on eBay, but I have purchased wire directly from him about 8 to 10 times with good results. So if you want to go direct it is: _kwanmingmak@..._ (mailto:kwanmingmak@...)

I have bought well over 2,000' of his 660/46 and 330/46 Litz wire.

There is no problem soldering his wire, which is Chinese made. The way I solder it is to use a 40 watt iron, with good quality Rosen core solder and heat the wire while adding solder to the iron, which is placed under the wire. Once I have melted solder into the Litz wire I quickly wipe it with a rage and heat it up again and adding more solder and again wipe it.

Everett

In a message dated 2/16/2013 12:48:56 P.M. Central Standard Time, lpwjy@... writes:

Phil, Some patient cables(at least this was true 30+ years ago) have graphite powder between the shield and the insulation around the center conductor. Some cable manufacturers claim the graphite reduces motion generated noise or "artifact". And the input impedance of a typical electrocardiogram(EKG or ECG) amplifier front end is no less than tens of megohms. And I won't
guarantee that you can solder to the center conductor of a typical patient cable. Further I don't see why an EKG patient cable would be made with Litz wire. The EKG signal spectrum extends to a few thousand Hertz at most and the amplifier front end impedance is high. Skin effect is not a problem in that application.

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To: loopantennas@yahoogroups.com
From: myamiphil@...
Date: Sat, 16 Feb 2013 08:29:09 -0800
Subject: Re: [loopantennas] Re: 660/46 Litz Wire Source

Did you use medical ecg patient cables? I wanted to use some for a very short length needed for an rf antenna connection. I stripped it back and found the very soft and fine wire. I'm figuring it Litz. I tried to find specs

on the cables but no go. I have no idea what the impedance is.. I'm guessing its 50 ohms.

I can get a few of these easily.. They are usually 10 ft lengths. So for any decent length needed for a loop it'll have to be soldered together to get the needed length.

Is this what you did?

Best Regards
Phil
Lat: 40.8367633 Long: -74.1768412

_____
From: William Young <lpwjy@...>
To: Loop Antenna Group Yahoo <loopantennas@yahoogroups.com>
Sent: Saturday, February 16, 2013 12:18 AM
Subject: RE: [loopantennas] Re: 660/46 Litz Wire Source

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To: loopantennas@yahoogroups.com
From: jpopelish@...
Date: Fri, 15 Feb 2013 23:39:39 +0000
Subject: [loopantennas] Re: 660/46 Litz Wire Source

--- In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
, "WilliamY" wrote:
>
> Does anyone know where I can buy 30 feet of 660/46 Litz wire(solderable)?
> It's available on ebay, but I would have to buy 60 feet or go outside of ebay to complete a transaction which I'm reluctant to do.
>
> I want to build a two winding loop to plug into my existing rotateable loop antenna base so I can tune 1700 kHz to about 5,000 kHz.

There is an ebay auction for 60 feet of 330/46 litz. You could parallel a pair of these to make your antenna, for $20.

--
Regards,

John Popelish

9707. Re: 660/46 at 1700 kHz ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-17 11:03:43 UTC
From: Hue Miller
Topic: 9707 Message: 9707

Loop Antenna News and Information ForumIs it really necessary to use Litz at those frequencies?
Also, why the procedure which uses a rag to wipe the soldered point?
I have never worked with 46 ga. but it seems to me you would want to
avoid anything that might break the strands exiting the solder point.
-Hue

9708. Re: [loopantennas] Re: 660/46 at 1700 kHz ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-17 11:35:53 UTC
From: Everettsharp
Topic: 9707 Message: 9708

When you heat the Litz wire you are melting/burning the varnish insulation on each wire strand, which leaves a lot of ash/cobs of black crap. I have soldered well over 200 to 300 Litz wire ends and have never broken one strand, that I know of.

Everett

Sent from my iPhone

On Feb 17, 2013, at 5:03 AM, "Hue Miller" <kargo_cult@...> wrote:

> Is it really necessary to use Litz at those frequencies?
> Also, why the procedure which uses a rag to wipe the soldered point?
> I have never worked with 46 ga. but it seems to me you would want to
> avoid anything that might break the strands exiting the solder point.
> -Hue
>

9709. Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-18 13:14:19 UTC
From: bk915
Topic: 9701 Message: 9709

I'm just becoming aware of Litz wire but only know limited info on it. I think it's having each strand insulated as a way of decreasing 'skin' effect? I'm sure there's a lot more to it than that.

Over the weekend I built a loop from a pdf I found somewhere that's from a UK mag 1989. This guy decided to make his own 'Litz' wire. He took 30awg wire-wrap wire, stuck a couple nails in his fence 100ft apart and ran the wire back and forth 16 times, chucked one end in a drill and wound it up. I didn't do that, I just used what I had, which was solid Cu enamled. I need to find something that's not so rigid.

Anyway, thoughts on what this guy did?

Bill W2NVD

--- In loopantennas@yahoogroups.com, "WilliamY" <lpwjy@...> wrote:
>
> Does anyone know where I can buy 30 feet of 660/46 Litz wire(solderable)?
> It's available on ebay, but I would have to buy 60 feet or go outside of ebay to complete a transaction which I'm reluctant to do.
>
> I want to build a two winding loop to plug into my existing rotateable loop antenna base so I can tune 1700 kHz to about 5,000 kHz.
>
> Thanks. Bill Young WD5HOH
>

9710. Re: [loopantennas] Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-18 14:28:25 UTC
From: John Popelish
Topic: 9701 Message: 9710

On 02/18/2013 08:14 AM, bk915 wrote:
> I'm just becoming aware of Litz wire but only know
> limited info on it. I think it's having each strand
> insulated as a way of decreasing 'skin' effect? I'm sure
> there's a lot more to it than that.

Reducing skin effect is most of it. It makes use of almost all the copper as part of the RF conductivity, without wasting the space (and surface capacitance) of having a large, effectively hollow conductor.

> Over the weekend I built a loop from a pdf I found
> somewhere that's from a UK mag 1989. This guy decided to
> make his own 'Litz' wire. He took 30awg wire-wrap wire,
> stuck a couple nails in his fence 100ft apart and ran the
> wire back and forth 16 times, chucked one end in a drill
> and wound it up. I didn't do that, I just used what I
> had, which was solid Cu enamled. I need to find something
> that's not so rigid.
>
> Anyway, thoughts on what this guy did?

I like wire wrap wire, because it is silver plated and has a low loss insulation (Kynar) that puts the strands a lot farther apart than the enamelled strands of Litz, so the inductance per foot is lower (though the capacitance per foot is higher). But 30 ga. is way coarser than most Litz (down to 46 ga.) so it is really starting to have lots of skin effect at a MHz and above. But I think it is still a big improvement over solid wire, of the same overall cross section, even above the broadcast band.

A few years back, when I was crazy, I bought a huge reel (miles) of twisted pair, 30 ga, wire wrap (black and yellow) and have used only a few feet. If you or anyone wants a hunk of that to make into multi-strand rope, let me know by email, and I'll send you some.

jpopelish at gmail dot com

--
Regards,

John Popelish

9711. Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-19 04:14:42 UTC
From: thb201
Topic: 9701 Message: 9711

Litz wire is not just twisted small gauge insulated wire. The gauge of the small strands is sized depending on the frequency range over which it will be used so that most of the wire cross section will carry RF current while minimizing skin effect. For example, for 850kHz. to 1.4MHz., 46 ga. wire is used. For 1kHz. to 10kHz., 30 ga. wire is used. This is because at lower frequencies the skin effect is less and larger sized wire can be used before skin effect starts occurring.

When they manufacture Litz wire it is wound in such a way that over any given length of cable, each wire strand will move through each possible position within the wire bundle. This is a much more complicated operation than just twisting the wires. With twisting any given strand will pretty much stay in the same position within the bundle relative to the other strands, while with Litz no two strands will stay near each for any length within the bundle as they are constantly changing position relative to each other.

Cheers,
John

9712. Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-19 13:19:55 UTC
From: bk915
Topic: 9701 Message: 9712

Thanks John and John. I'm wondering whether I even need litz wire. Is one of the reasons for it to increase bandwidth?

Also, I think the Q on the antenna I just made is too high. It has a very sharp peak that's too narrow to pass the full station passband. I have a pdf regarding this and I can't locate it. I seem to recall that fewer turns results in more gain but less Q, and this is where I read that bit about being too sharp. Although, it said that this would be good for very crowded conditions, which I think might be helpful trying to get something from EU that might be between two stations here.

Something interesting I'm starting to think about, we picked up this qth a few years ago after someone else had gutted it and done a bunch of work on it. They re-sided it with cast plank siding, but underneath it they put a full sheath of foil covered insulation panels. Reception inside isn't too bad, the antenna does a fine job of nulling out the noise from the pellet stove, but I think I'm going to make my MW listening post on the third floor, which we had finished. The only thing up there is the roofing, with nothing inside except foam insulation and sheetrock. That'll be coming in the next week or so, I guess I'll find out if it makes much difference.

Thanks again,

Bill W2NVD

--- In loopantennas@yahoogroups.com, "thb201" <hudakjm@...> wrote:
>
> Litz wire is not just twisted small gauge insulated wire. The gauge of the small strands is sized depending on the frequency range over which it will be used so that most of the wire cross section will carry RF current while minimizing skin effect. For example, for 850kHz. to 1.4MHz., 46 ga. wire is used. For 1kHz. to 10kHz., 30 ga. wire is used. This is because at lower frequencies the skin effect is less and larger sized wire can be used before skin effect starts occurring.
>
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>
> Cheers,
> John
>

9713. Re: [loopantennas] Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-19 16:25:23 UTC
From: g.preston@...
Topic: 9701 Message: 9713

At 05:19 AM 2/19/2013, you wrote:
>Thanks John and John. I'm wondering whether I even need litz wire.
>Is one of the reasons for it to increase bandwidth?
>
>Also, I think the Q on the antenna I just made is too high. It has a
>very sharp peak that's too narrow to pass the full station passband.

I would think a narrow BW means a high Q which means low
losses. Would an increased BW indicate higher losses? Are higher
losses preferred?

73 de k5gp

9714. Re: 660/46 Litz Wire Source

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-19 21:22:08 UTC
From: redsp
Topic: 9701 Message: 9714

--- In loopantennas@yahoogroups.com, g.preston@... wrote:
>
> At 05:19 AM 2/19/2013, you wrote:
> >Thanks John and John. I'm wondering whether I even need litz wire.
> >Is one of the reasons for it to increase bandwidth?
> >
> >Also, I think the Q on the antenna I just made is too high. It has a
> >very sharp peak that's too narrow to pass the full station passband.
>
>
> I would think a narrow BW means a high Q which means low
> losses. Would an increased BW indicate higher losses? Are higher
> losses preferred?
>
> 73 de k5gp

If a loop antenna is tuned with a capacitor it forms a tuned circuit. The Q of this circuit is the inductive reactance divided by the resistance. This tells you how large a voltage will form from a constant level of stimulus as the oscillations build up. A higher signal level of course is better at the input of the receiver. But it makes the circuit slower to respond to changes in the level of stimulus. This is manifested as a narrower bandwidth with a higher Q.

Think of a pendulum swinging. One with a heavier weight is like a circuit with a higher Q. It takes longer to get it swinging and once you stop pushing it, it takes longer to slow down. So it responds more slowly to changes and has a narrower bandwidth.

The tradeoff is between the signal level and the bandwidth. If you add more resistance to increase the bandwidth, you lower the signal level.

Rick

9716. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-24 20:31:31 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 9716

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /APolldoroff,4coilSTLSantenna.pdf
Uploaded by : everettsharp74 <everettsharp@...>
Description : A Pollydoroff, MW 4 coil, Stacked Toroid Loop Stick Antenna

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/APolldoroff%2C4coilSTLSantenna.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

everettsharp74 <everettsharp@...>

9717. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-24 22:30:14 UTC
From: redsp
Topic: 9584 Message: 9717

--- In loopantennas@yahoogroups.com, "jpopelish" <jpopelish@...> wrote:
>
> --- In loopantennas@yahoogroups.com, "redsp" wrote:
>
> > You've given me something to think about. What about the inductance of the secondary? How does that impact the primary circuit? Wouldn't that affect the tuning of the primary?
> (snip)
>
> According to the data sheet, the 200 turn winding has at least 80mH inductance. That means a single turn primary will have only 1/40,000th of that or 2uH inductance. This gives you an idea of the core they used, since you know roughly the size, and that it produces about 2uHy with one turn.
>
> But you can add as many turns as you wish to the primary to raise the primary inductance and lower the turns ratio.
>
> You can also tune the inductance with capacitance. This might work best with a series capacitor between the loop and the primary, and a parallel capacitance across the secondary of the transformer.

I've been doing some LTspice simulations on this. I think I need to add some passive circuitry to apply a DC bias to put the differential input on the edge of triggering, so I included this in the simulation along with the parasitic capacitance of the chip input. The antenna has a loop inductance of about 90 uH. In LTspice the transformer turns ratio is indicated by attaching the corresponding inductance on the secondary (L1*N^2). I'm not sure how a real transformer works in this regard, inductance of primary and secondary.

At very high turns ratios the parasitic capacitance creates a resonance with a null when looking at the tuning capacitance on the antenna. If that gets too close in frequency to the peak for the signal, it greatly disrupts the Q and the bandwidth making it very twitchy to tuning. Using the secondary capacitance alone to tune the response seems to drop the output voltage significantly with readings of -dB rather than some +60 to +70 dB when tuned with the primary capacitor. I'm not familiar with analysis of this circuit to understand why a null is created on the primary cap, but not the output...

The optimum balance seems to be a turns ratio around 25 to 33. In this range the difference in tuned output is in the 1 dB ballpark, but if the secondary capacitance drifts 1 pF the offtuning creates anywhere from -4 to -6 dB attenuation. Oddly at the higher turns ratios where the tuned signal is strongest the attenuation is such that the offtuned signal is weaker than at lower turns ratios. I'm not sure how realistic is a 1 pF drift with temperature, etc. of the inductor, PCB traces and the IC input.

Even odder is that if I add some capacitance to the secondary side in an attempt to swamp out the parasitic capacitance, the circuit has a higher Q and becomes *more* sensitive to that same 1 pF change!!!

I think I am a bit concerned with the capacitance of the secondary coil. If it has much capacitance I will have to run the coil with an even lower turns ratio.

No wonder they call it *complex* math.

Rick

9718. Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-24 22:30:57 UTC
From: ceo@andygardner.com
Topic: 4 Message: 9718

Nice looking loop, but I'm not sure about using PVC as a former and cover is a good idea, Q wise.

From what I can ascertain, the loss tangent of PVC is around 0.023 at MW freqs.

You want to steer clear of PET ABS and PVC...

Table of loss tangents:
Polystyrene 0.0001 (recycle #6)
LDPE 0.00012 (recycle #4)
HDPE 0.0002 (recycle #2)
PTFE (Teflon) 0.00025
Polypropylene (PP) (recycle #5) 0.0002 - 0.0005
PET 0.014 (recycle #1)
ABS 0.02
PVC 0.023 (recycle #3)

Could you do some Q measurements on it, then try another one with polypropylene pipe instead? It would interesting to see if there is a major difference in Q factor.

I think one of the reasons the FSL's do so well is the construction technique - that foam stuff everyone uses between the ferrites and the coil has a nice low loss tangent.

> This email message is a notification to let you know that
> a file has been uploaded to the Files area of the loopantennas
> group.
>
> File : /APolldoroff,4coilSTLSantenna.pdf
> Uploaded by : everettsharp74 everettsharp@...>
> Description : A Pollydoroff, MW 4 coil, Stacked Toroid Loop Stick Antenna

9719. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 02:33:17 UTC
From: John Popelish
Topic: 9584 Message: 9719

On 02/24/2013 05:30 PM, redsp wrote:

(snip)
> At very high turns ratios the parasitic capacitance
> creates a resonance with a null when looking at the
> tuning capacitance on the antenna. If that gets too
> close in frequency to the peak for the signal, it greatly
> disrupts the Q and the bandwidth making it very twitchy
> to tuning. Using the secondary capacitance alone to tune
> the response seems to drop the output voltage
> significantly with readings of -dB rather than some +60
> to +70 dB when tuned with the primary capacitor. I'm not
> familiar with analysis of this circuit to understand why
> a null is created on the primary cap, but not the
> output...
>
> The optimum balance seems to be a turns ratio around 25
> to 33. In this range the difference in tuned output is
> in the 1 dB ballpark, but if the secondary capacitance
> drifts 1 pF the offtuning creates anywhere from -4 to -6
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> the tuned signal is strongest the attenuation is such
> that the offtuned signal is weaker than at lower turns
> ratios. I'm not sure how realistic is a 1 pF drift with
> temperature, etc. of the inductor, PCB traces and the IC
> input.
>
> Even odder is that if I add some capacitance to the
> secondary side in an attempt to swamp out the parasitic
> capacitance, the circuit has a higher Q and becomes
> *more* sensitive to that same 1 pF change!!!
>
> I think I am a bit concerned with the capacitance of the
> secondary coil. If it has much capacitance I will have
> to run the coil with an even lower turns ratio.
(snip)

If you upload your simulation file (not raw file), I will
take a look and check out your simulation, as best I can.

Maybe I'll be able to suggest some improvement.

--
Regards,

John Popelish

9720. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 02:40:00 UTC
From: John Popelish
Topic: 4 Message: 9720

On 02/24/2013 05:30 PM, ceo@... wrote:

> You want to steer clear of PET ABS and PVC...
>
> Table of loss tangents:
> Polystyrene 0.0001 (recycle #6)
> LDPE 0.00012 (recycle #4)
> HDPE 0.0002 (recycle #2)
> PTFE (Teflon) 0.00025
> Polypropylene (PP) (recycle #5) 0.0002 - 0.0005
> PET 0.014 (recycle #1)
> ABS 0.02
> PVC 0.023 (recycle #3)
>
> Could you do some Q measurements on it, then try another
> one with polypropylene pipe instead? It would interesting
> to see if there is a major difference in Q factor.
>
> I think one of the reasons the FSL's do so well is the
> construction technique - that foam stuff everyone uses
> between the ferrites and the coil has a nice low loss
> tangent.

But using a tube of plastic as a coil form is not making a
tuning capacitor with these plastics as the dielectric. It
is not even between the turns, but only beside them.

The plastic makes up only a fraction of the total dielectric
involved in the coil parallel capacitance.
So the plastic losses might not be so significant as these
numbers indicate.

--
Regards,

John Popelish

9721. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 02:59:23 UTC
From: toddroberts2001@...
Topic: 4 Message: 9721

Most crystal radio set builders have settled on Polystyrene
as the best material for highest-Q coil forms. Some crystal set
builders have built coils with Qs up to 2000 and above.

Once you get a good coil form material then the type of
wire used makes the biggest difference in Q with Litz Wire being
the best.

However receiving loop builders don't necessarily want the
highest Q as it will narrow the bandwidth too much making
the tuning very narrow and peaky and the audio sound narrow and muffled.

Some builders purposely use plain enameled wire instead
of Litz Wire for this reason. It will need to be trial and error
to find the best all-around Q without being too narrow.

But if you are going for all-out Q then try to use Polystyrene
for the coil form or supports and heavy Litz Wire like #660/46 for
broadcast band use.

73 - Todd WD4NGG

9722. Re: [loopantennas] Plastics usage and the Pollydoroff 4 coil STLS antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 13:55:19 UTC
From: everettsharp@...
Topic: 9722 Message: 9722

Well Guys,

PVC would not be my first choice, however, it was the only thing that I could come up with that would work for my project. I know that Ben Tongue and the guys on Rap and Tap do not like PVC, but as Tod has mentioned those are the Crystal Radio gurus, where selectivity is very important.

All of that being said, Stormwise, whom sell their Monster Ferrite Rods, which are Ferrite slugs that are epoxied inside a thick walled PVC pipe and than there are the Brazilians whom have a lot of info on the web with their bundled Russian ferrite rods, which are housed inside of PVC pipe. So others are using it, even though it is not the best choice of materials.

I have no way to measure Q, however, I can say that the tuning is very sharp, which is an indication of high Q. I also saw very good rotational nulls, much better than my 1 meter air loop. What I did notice is that the tuning range was reduced from 400-2290 KHz to 400-2244 KHz, when I placed the 2" PVC pipe over the finished coil, so it did add a very minor amount of capacitance to the circuit.

I like the 660/46 Litz wire, even though it may have been over kill for this project, because it is easy to use, other than the soldering. It has about the same cross section area as 18 gage wire, but it is not springy, so the wire raps stay in place, it is like using a piece of string.

Based on my may experiments with different winding configurations I have found the Pollydoroff design, that I used in this project, to be a very good performer, over other configurations. However, in some of my earlier experiments I got some very strange results, like very wide tuning and sharp nulls on the high side of the station, but no nulls on the low side of the station. What I later found out was that you need a lot of space between the coils. I have had very good results with 1 1/2 to 3" of space between the coils. At some point I am going to try even wider spacing and I may try 6 coils. I have enough of the toroids to build a wider rod. The rule of thumb for the L/D ratio is 10:1 to 20:1, so I could go up to 28" on rod length, which should work well for a 6 coil Pollydoroff design loop.

Everett

In a message dated 2/24/2013 8:59:28 P.M. Central Standard Time, toddroberts2001@aol.com writes:

Most crystal radio set builders have settled on Polystyrene as the best material for highest-Q coil forms. Some crystal set builders have built coils with Qs up to 2000 and above.

Once you get a good coil form material then the type of
wire used makes the biggest difference in Q with Litz Wire being
the best.

However receiving loop builders don't necessarily want the
highest Q as it will narrow the bandwidth too much making
the tuning very narrow and peaky and the audio sound narrow and muffled.

Some builders purposely use plain enameled wire instead
of Litz Wire for this reason. It will need to be trial and error
to find the best all-around Q without being too narrow.

But if you are going for all-out Q then try to use Polystyrene
for the coil form or supports and heavy Litz Wire like #660/46 for
broadcast band use.

73 - Todd WD4NGG

9723. RE: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 22:19:04 UTC
From: Ray Phillips
Topic: 4 Message: 9723

What would be the downside of making a coil with the highest Q possible and then introducing a small amount of variable resistance to modify the Q to improve the audio?

To: loopantennas@yahoogroups.com
From: toddroberts2001@...
Date: Sun, 24 Feb 2013 21:59:23 -0500
Subject: Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Most crystal radio set builders have settled on Polystyrene as the best material for highest-Q coil forms. Some crystal set builders have built coils with Qs up to 2000 and above.

Once you get a good coil form material then the type of wire used makes the biggest difference in Q with Litz Wire being the best.

However receiving loop builders don't necessarily want the highest Q as it will narrow the bandwidth too much making the tuning very narrow and peaky and the audio sound narrow and muffled.

Some builders purposely use plain enameled wire instead of Litz Wire for this reason. It will need to be trial and error to find the best all-around Q without being too narrow.

But if you are going for all-out Q then try to use Polystyrene for the coil form or supports and heavy Litz Wire like #660/46 for broadcast band use.

73 - Todd WD4NGG

9724. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 22:33:29 UTC
From: toddroberts2001@...
Topic: 4 Message: 9724

In a message dated 2/25/2013 5:19:37 P.M. Eastern Standard Time, uggliozzi@... writes:

What would be the downside of making a coil with the highest Q possible and then introducing a small amount of variable resistance to modify the Q to improve the audio?

That is a very good idea to wire in a variable resistor across the coil and some builders have done that in the past. It is called a "Q-Killer" resistor and it is a way to tailor the bandwidth of the loop antenna to your liking.

You can widen the bandwidth for best fidelity or narrow it down for best selectivity for DX and have the best of both worlds. I think something in the value of a 100K pot is used for this and a small switch to switch it in and out of the circuit.

73 - Todd WD4NGG

9725. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 23:02:39 UTC
From: everettsharp@...
Topic: 4 Message: 9725

Hi Tod,

I might give that a try with the new STLS, as the tuning is razor sharp and does somewhat distort the sound quality.

I should have a new play thing by the end of the week, as I ordered one of the new Commradio CR-1 Receivers. It will make it easer for me to evaluate my various antenna projects. It has a battery, so it should be very portable. _http://www.commradio.com/cr-1-communications-receiver/_ (http://www.commradio.com/cr-1-communications-receiver/)

73's Everett N8CNP

In a message dated 2/25/2013 4:33:32 P.M. Central Standard Time, toddroberts2001@... writes:

In a message dated 2/25/2013 5:19:37 P.M. Eastern Standard Time, _uggliozzi@..._ (mailto:uggliozzi@...) writes:

What would be the downside of making a coil with the highest Q possible
and
then introducing a small amount of variable resistance to modify the Q to improve the audio?

That is a very good idea to wire in a variable resistor across the coil and some builders have done that in the past. It is called a "Q-Killer" resistor and it is a way to tailor the bandwidth of the loop antenna to your liking.

You can widen the bandwidth for best fidelity or narrow it down for best selectivity for DX and have the best of both worlds. I think something in the value of a 100K pot is used for this and a small switch to switch it in and out of the circuit.

73 - Todd WD4NGG

9726. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-25 23:35:44 UTC
From: John Popelish
Topic: 4 Message: 9726

On 02/25/2013 05:19 PM, Ray Phillips wrote:
> What would be the downside of making a coil with the
> highest Q possible and then introducing a small amount of
> variable resistance to modify the Q to improve the
> audio?

Only the cost of using better materials than you need. You
can always lower the Q.

--
Regards,

John Popelish

9727. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 00:44:54 UTC
From: ceo@andygardner.com
Topic: 4 Message: 9727

Use of a better plastic for the former/cover instead of PVC might allow for a loop with the same Q using normal wire instead of having to buy litz wire to make up for the dampening effect of the PVC.

Some PVC has lead added to it to make it last longer in sunlight IIRC.

On 26/02/2013, at 12:35 PM, John Popelish wrote:

> On 02/25/2013 05:19 PM, Ray Phillips wrote:
> > What would be the downside of making a coil with the
> > highest Q possible and then introducing a small amount of
> > variable resistance to modify the Q to improve the
> > audio?
>
> Only the cost of using better materials than you need. You
> can always lower the Q.

9728. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 01:11:41 UTC
From: Everettsharp
Topic: 4 Message: 9728

I think that you are making too much to do about nothing when using PVC for a general use loop antenna. I have used PVC on several projects and it would be difficult to see any degraded performance from using it. As I mentioned before the only thing I have seen is a very small reduction in tuning range, which you can get from crossing the two wires going to the variable capacitor.

Build something and see for yourself, theory does not always prove out when applied in practice.

Everett

Sent from my iPhone

On Feb 25, 2013, at 6:44 PM, "ceo@..." <ceo@...> wrote:

>
> Use of a better plastic for the former/cover instead of PVC might allow for a loop with the same Q using normal wire instead of having to buy litz wire to make up for the dampening effect of the PVC.
>
> Some PVC has lead added to it to make it last longer in sunlight IIRC.
>
> On 26/02/2013, at 12:35 PM, John Popelish wrote:
>
> > On 02/25/2013 05:19 PM, Ray Phillips wrote:
> > > What would be the downside of making a coil with the
> > > highest Q possible and then introducing a small amount of
> > > variable resistance to modify the Q to improve the
> > > audio?
> >
> > Only the cost of using better materials than you need. You
> > can always lower the Q.
>
>

9729. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 01:28:46 UTC
From: ceo@andygardner.com
Topic: 4 Message: 9729

I built a 300mm diameter FSL with ferrites mounted inside the 10mm thick pvc pipe and the windings on the outside and the Q was terrible. Figuring out the Q problem is what lead me to loss tangents of plastics.

My current project uses 470mm diameter polypropylene with gapped ferrite rods. Unfortunately, completion has been delayed due to a tangental arduino-controlled stepper motor autotune variable capacitor project. Shouldn't be long now.

On 26/02/2013, at 2:11 PM, Everettsharp wrote:

> Build something and see for yourself, theory does not always prove out when applied in practice.
>

9730. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 02:08:24 UTC
From: John Popelish
Topic: 4 Message: 9730

On 02/25/2013 08:28 PM, ceo@... wrote:
>
> I built a 300mm diameter FSL with ferrites mounted inside
> the 10mm thick pvc pipe and the windings on the outside
> and the Q was terrible. Figuring out the Q problem is
> what lead me to loss tangents of plastics.
>
> My current project uses 470mm diameter polypropylene with
> gapped ferrite rods. Unfortunately, completion has been
> delayed due to a tangental arduino-controlled stepper
> motor autotune variable capacitor project. Shouldn't be
> long now.

Please let us know about the relative results, when you get
there.

Thanks.

--
Regards,

John Popelish

9731. Ron Harries

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 02:25:46 UTC
From: Ron Harries
Topic: 9731 Message: 9731

xtyfuduichttp://www.morelco-sa.com/cufkp/honqelkuu562jd.s2quh?3gascnpfksl2/26/2013 3:25:44 AMRon Harries

9732. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 12:06:46 UTC
From: Everettsharp
Topic: 4 Message: 9732

Give me more details, what kind of wire did you use, how many coils, if more than one coil, what spacing did you use between the coils?

A picture would be good also. You must have used a pipe coupling, with that thickness? The PVC that I used is less than 1 mm in thickness.

There are many things that can kill the Q and as you say it maybe the PVC, but it would be good to see what else is involved in the construction. Do you have any inductance info on the coil, number of turns and so on?

Sent from my iPhone

On Feb 25, 2013, at 7:28 PM, "ceo@..." <ceo@...> wrote:

>
> I built a 300mm diameter FSL with ferrites mounted inside the 10mm thick pvc pipe and the windings on the outside and the Q was terrible. Figuring out the Q problem is what lead me to loss tangents of plastics.
>
> My current project uses 470mm diameter polypropylene with gapped ferrite rods. Unfortunately, completion has been delayed due to a tangental arduino-controlled stepper motor autotune variable capacitor project. Shouldn't be long now.
>
> On 26/02/2013, at 2:11 PM, Everettsharp wrote:
>
> > Build something and see for yourself, theory does not always prove out when applied in practice.
> >
>
>

9733. Re: [loopantennas] Plastics usage (was New file uploaded to loopantennas)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 13:18:17 UTC
From: Chris Trask
Topic: 4 Message: 9733

>
>I built a 300mm diameter FSL with ferrites mounted inside the 10mm thick pvc pipe and the
>windings on the outside and the Q was terrible. Figuring out the Q problem is what lead me
>to loss tangents of plastics.
>
>My current project uses 470mm diameter polypropylene with gapped ferrite rods.
Unfortunately,
>completion has been delayed due to a tangental arduino-controlled stepper motor autotune
>variable capacitor project. Shouldn't be long now.
>

I've built a number of loops using copper tubing for the element proper and PVC for the support structure and haven't noticed any problems. But then I build mine a bit differently that other people do so as to simplify the construction and the method of tuning:

http://www.home.earthlink.net/~christrask/Paper012.html

There was some discussion about a year ago about the improved Q that results from separating the wires from the ferrite by way of a thin layer of plastic, such as PVC heat shrink tubing. It was a result of discussing the FSL.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

9734. Twisting strands together

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 19:56:22 UTC
From: jpopelish
Topic: 9734 Message: 9734

I found this video of a jump rope twister, that shows the principles of twisting strands together, so they form a neat rope that does not unwind. I think the device is overly complicated and over priced. I made something very simple and cheap out of three bent cranks, made of hanger wire, that were turned, in unison, by a board with three holes.

"Red Hot Pepper Jump Rope Winder"
http://www.youtube.com/watch?v=yoFcY8qA4rw

http://www.wordworth.com/jump_rope.htm

I think the idea could easily be extended to 4 or 5 strands, not just 3.

--
Regards,

John Popelish

9735. Re: [loopantennas] Twisting strands together

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-26 20:41:55 UTC
From: Myamiphil
Topic: 9734 Message: 9735

Caught sight of a building like this in the Boston Naval shipyard while in the Navy.. They made the mooring lines for the ships.

Can't imagine what one would look like for Litz wire!

Best Regards
Phil
Lat: 40.8367633 Long: -74.1768412

From: jpopelish <jpopelish@...>
To: loopantennas@yahoogroups.com
Sent: Tuesday, February 26, 2013 2:56 PM
Subject: [loopantennas] Twisting strands together

I found this video of a jump rope twister, that shows the principles of twisting strands together, so they form a neat rope that does not unwind. I think the device is overly complicated and over priced. I made something very simple and cheap out of three bent cranks, made of hanger wire, that were turned, in unison, by a board with three holes.

"Red Hot Pepper Jump Rope Winder"
http://www.youtube.com/watch?v=yoFcY8qA4rw

http://www.wordworth.com/jump_rope.htm

I think the idea could easily be extended to 4 or 5 strands, not just 3.

--
Regards,

John Popelish

9736. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 00:15:07 UTC
From: redsp
Topic: 9584 Message: 9736

--- In loopantennas@yahoogroups.com, John Popelish <jpopelish@...> wrote:
>
> If you upload your simulation file (not raw file), I will
> take a look and check out your simulation, as best I can.
>
> Maybe I'll be able to suggest some improvement.

I uploaded the simulation files to Antenna_LTspice.zip One is just the basic antenna circuit with the parasitic capacitance on the IC inputs. The other includes some circuitry I am adding to make the digital input work for low level AC signals.

I've done some more work with the simulation and I've also been doing some reading on tuned circuit and I think I understand it better. I can calculate the frequency of the various artifacts that I see now. To calculate the resonance peak, I need to reflect the secondary side capacitance to the primary side using the square of the turns ratio. Adding this to the primary capacitance and using that with the primary inductance gives me the frequency of resonance. The null in the primary cap (C1) voltage is just the resonance of the secondary side. When the frequency is reached where the parasitic cap (C2) resonates without the primary cap, the result is that the voltage on the L1 side of the transformer matches the exciting voltage and the C1 capacitor sees no voltage, so a null.

This is really a red herring and I was just confused by it. When this null gets close to the primary resonance, it means the secondary cap is getting very large and the primary cap is getting small. In the limit of using no primary cap the secondary cap will create a resonance but it won't have the advantage of the transformer turns ratio I expect and the resulting peak is not nearly as high as it could be. This limits the turns ratio to around 75 before the circuit becomes self resonant with the secondary parasitic capacitance.

I was seeing higher Q factors when I used a little secondary capacitance. But this doesn't really improve the signal strength at the output a lot. My real circuit has some passives to provide DC biasing so the digital input on the receiver will be most sensitive to the antenna signal. I included these components in the simulation file antenna.asc while antenna_transformer.asc only includes the transformer. These components were made high impedance, but still have some affect on the Q and max signal strength, limiting it to around 70 dB in the simulation.

In the end the best way to operate this circuit is with a turns ratio around 25 to 33 and with a minimum of capacitance on the secondary. This still produces a decent gain without the response being excessively peaky and overly sensitive to small changes in the secondary capacitance.

The coils I ended up with have 300 turns so I will be wrapping some number of turns on the primary to adjust the turns ratio. So that I can experiment with this, I expect to have multiple coils for the primary, 1, 2, 4 and 8 which will let me combine them in 15 combinations to produce turns ratios between 20 and 300.

My main concern is just how much variation I will see from temperature effects on the circuit once it has been tuned for 60,000 Hz. It may be very twitchy depending on how sensitive the parasitic capacitance is to temperature.

BTW, I've learned a lot about LTspice doing this design, not to mention tuned transformer circuits.

Rick

9737. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 02:09:58 UTC
From: John Popelish
Topic: 9584 Message: 9737

On 02/26/2013 07:15 PM, redsp wrote:

> I uploaded the simulation files to Antenna_LTspice.zip
> One is just the basic antenna circuit with the parasitic
> capacitance on the IC inputs. The other includes some
> circuitry I am adding to make the digital input work for
> low level AC signals.

I took a look at your tuned transformer circuit and have altered it to illustrate a few concepts. I changed out the voltage source in the primary loop with a current fed, field coil, as a signal source. I also added an inductor in the primary loop to represent the antenna coil. The field coil is very loosely coupled to the antenna coil (K = 0.001), to represent the magnetic field the antenna will pick up from space, without the field generator coil having any significant effect on the tuning of the antenna inductor.

I also rearranged the current transformer, so that the secondary is a fixed inductance (as a prefab CT will have) and made the primary inductance a function of the primary turns count (that you will add).

I am working with a very clunky Windows simulator in a Linux system, so I did not have time to clean up everything and make sure all your measure commands still made sense. But I hope the concepts I introduced are clear enough to be useful for you.

I uploaded the file to the Popelish folder as Antenna_transformer_w_loop.asc

If I get the chance, I may work on it a bit more.

Let me know if this makes any sense to you.

--
Regards,

John Popelish

9738. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 02:40:32 UTC
From: redsp
Topic: 9584 Message: 9738

--- In loopantennas@yahoogroups.com, John Popelish <jpopelish@...> wrote:
>
> On 02/26/2013 07:15 PM, redsp wrote:
>
> > I uploaded the simulation files to Antenna_LTspice.zip
> > One is just the basic antenna circuit with the parasitic
> > capacitance on the IC inputs. The other includes some
> > circuitry I am adding to make the digital input work for
> > low level AC signals.
>
> I took a look at your tuned transformer circuit and have
> altered it to illustrate a few concepts. I changed out the
> voltage source in the primary loop with a current fed, field
> coil, as a signal source. I also added an inductor in the
> primary loop to represent the antenna coil. The field coil
> is very loosely coupled to the antenna coil (K = 0.001), to
> represent the magnetic field the antenna will pick up from
> space, without the field generator coil having any
> significant effect on the tuning of the antenna inductor.
>
> I also rearranged the current transformer, so that the
> secondary is a fixed inductance (as a prefab CT will have)
> and made the primary inductance a function of the primary
> turns count (that you will add).

I have wondered about the way I apply the stimulus. I think you misunderstand the circuit. L1 is the antenna coil. This is a large loop of wire which will make N turns around the coil core. I am unclear if the stimulus signal should be in series with the primary loop or if it should be applied across the cap and coil. In one case the primary will be a series resonant circuit in the other a parallel resonant circuit. The manner of stimulus is the only distinction that I can see between the two.

I'm not sure why the transformer should be changed the way you did. The antenna loop (L1) has a defined inductance. I actually had to research pretty hard to find a decent formula for it. Turns out there are *many* inductance formula and it is not so easy to figure out which one applies. How does the inductance of the two coils interact? I haven't found any good info on this. Most references assume both coils are wound in a similar way on a common core. I suppose the N turns around the core will affect the inductance of the primary. I don't have a number for the inductance of the secondary, the data sheet gives a very wide range, 180 - 335mH @1V, 10kHz.

> I am working with a very clunky Windows simulator in a Linux
> system, so I did not have time to clean up everything and
> make sure all your measure commands still made sense. But I
> hope the concepts I introduced are clear enough to be useful
> for you.

>
> I uploaded the file to the Popelish folder as
> Antenna_transformer_w_loop.asc
>
> If I get the chance, I may work on it a bit more.
>
> Let me know if this makes any sense to you.

I appreciate the time you are spending on this. One thing that still doesn't work perfectly is the center frequency measurement. It finds the max output value ok, but finding the frequency of that max value is not so easy. The method I use sometimes seems to "skip" over the match to the max value and gives an error. No information in the error message of course. LTspice is pretty great, but ease of use is not at the top of the list. BTW, they say LTspice runs great under wine. Have you tried that?

Rick

9739. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 02:44:29 UTC
From: redsp
Topic: 9584 Message: 9739

Just after I sent the prior message I was looking at the schematic and I get what you are doing with the separate coils in the primary. One is the antenna loop itself and the other is the turns around the secondary coil core. That makes sense. I'll play with this new configuration a bit.

Thanks,

Rick

9740. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 02:58:42 UTC
From: John Popelish
Topic: 9584 Message: 9740

On 02/26/2013 09:40 PM, redsp wrote:

> I have wondered about the way I apply the stimulus. I
> think you misunderstand the circuit. L1 is the antenna
> coil. This is a large loop of wire which will make N
> turns around the coil core. I am unclear if the stimulus
> signal should be in series with the primary loop or if it
> should be applied across the cap and coil. In one case
> the primary will be a series resonant circuit in the
> other a parallel resonant circuit. The manner of
> stimulus is the only distinction that I can see between
> the two.

There are probably several equivalent ways to put energy
into the antenna, but I like the field coil approach,
because I actually made a field coil to stimulate antennas.

The problem with your schematic is that the antenna coil
inductance is a separate inductive component than the
transformer primary, because one receives energy from the
external field and the other does not.

> I'm not sure why the transformer should be changed the
> way you did. The antenna loop (L1) has a defined
> inductance. I actually had to research pretty hard to
> find a decent formula for it. Turns out there are *many*
> inductance formula and it is not so easy to figure out
> which one applies. How does the inductance of the two
> coils interact? I haven't found any good info on this.
> Most references assume both coils are wound in a similar
> way on a common core. I suppose the N turns around the
> core will affect the inductance of the primary. I don't
> have a number for the inductance of the secondary, the
> data sheet gives a very wide range, 180 - 335mH @1V,
> 10kHz.

And the secondary inductance is not very high Q (it includes
significant core loss that shows up as something like a
parallel resistance across the secondary, because the high
permeability core is quite conductive). That is why the
entire system should not be tuned at the output of the
transformer. You don't want all the resonant stored energy
to have to slosh back and forth through that core. Most of
the inductive energy should be stored only in the high Q
antenna coil.

>> I am working with a very clunky Windows simulator in a
>> Linux system, so I did not have time to clean up
>> everything and make sure all your measure commands
>> still made sense.

(snip)

> BTW, they say LTspice runs great under wine. Have
> you tried that?

I tried, once, to install Wine, and hit a roadblock. My son is the Linux expert in the family, and one of these days, I want to try again, with his help.

--
Regards,

John Popelish

9741. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 20:39:19 UTC
From: jpopelish
Topic: 9584 Message: 9741

One other point. There are two completely complementary ways to use a coupling transformer, in an attempt to increase the signal output of your loop. The transformer primary can be in series with both the loop and the tuning capacitor, when the primary inductance is low (relative to the loop inductance), or in parallel with both the loop inductor and tuning capacitor, when the primary inductance is high (relative to the loop inductance). If the turns ratio is not large, you might also find a small improvement by putting the secondary in series with the primary (correctly phased to have their voltages add), since you do not need electrical isolation from the transformer, That way, both windings contribute to the output voltage.

In your simulations, I think you should compare the possibilities for both these approaches with connecting your amplifier input directly across the parallel combination of loop and tuning capacitor.

One of the three might be a clear winner.

--
Regards,

John Popelish

9742. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 23:11:41 UTC
From: redsp
Topic: 9584 Message: 9742

--- In loopantennas@yahoogroups.com, John Popelish <jpopelish@...> wrote:
>
> On 02/26/2013 09:40 PM, redsp wrote:
>
ll> And the secondary inductance is not very high Q (it includes
> significant core loss that shows up as something like a
> parallel resistance across the secondary, because the high
> permeability core is quite conductive). That is why the
> entire system should not be tuned at the output of the
> transformer. You don't want all the resonant stored energy
> to have to slosh back and forth through that core. Most of
> the inductive energy should be stored only in the high Q
> antenna coil.

But is this core loss included in the simulation? I don't see a term for that anywhere.

Actually I get a higher Q by adding some capacitance to the secondary which increases the secondary currrent, but requires a lowering of the primary capacitance. I assume this is because the reduced primary current raises the Q of the primary circuit. So in the simulation I think the Q of the secondary is higher than the Q of the primary.

> >> I am working with a very clunky Windows simulator in a
> >> Linux system, so I did not have time to clean up
> >> everything and make sure all your measure commands
> >> still made sense.
>
> (snip)
>
> > BTW, they say LTspice runs great under wine. Have
> > you tried that?
>
> I tried, once, to install Wine, and hit a roadblock. My son
> is the Linux expert in the family, and one of these days, I
> want to try again, with his help.

Some folks use a dual boot arrangement. Others run one OS and then run another in a sandbox under the first. I expect this takes a pretty good machine with lots of memory. Not something I have.

I worked on the measurement scripts a bit today. I am trying to measure all three features I see. I can calculate the frequency of the Vcap null exactly. That is the resonance of secondary inductance and capacitance. I can get within 5% of the first peak which is due to the total capacitance and the sum of the two inductors in the primary. But it is always low. I can't come up with any explanation of the higher frequency peak. No combination of inductance and capacitance in the circuit seems to produce this. I'm not comfortable not understanding what the simulation is telling me. That is rather the idea I think, to see

what it does and make sure it fits with the model. Otherwise the model may not be right. Obviously I don't understand the model.

I don't fully understand the field coil circuit. Why did you pick 1 mH for the radiator L4? I have no idea how to include that into the calculations and I don't know if this changes the signal strength value, not that it necessarily is a meaningful number anyway. But in my original circuit I assume the generator is the "untuned" voltage the antenna would receive and so the signal strength at Vout would be a realistic estimate of the level at the receiver input. I will try the other two methods of stimulating the circuit.

I also have some trouble getting LTspice to display "measured" data in meaningful ways. If it displays some data in dB, then *all* data is measured in dB. So if you want to see a straight numbmer it has to be reversed to anti-dB before being displayed. That is what some of my measurement statements were doing. lol

If you are interested I've uploaded a new file to your directory. Antenna_trans_LTspice.zip This contains the schematic with the radiator inductance set to match the antenna coil inductance along with the measurement file that can be run from the menu, File - Execute MEAS. Script. It is also in the schematic as commands, but the measure script can be run subsequent to the simulation.

I'm learning a few things about LTspice, but I still find the .MEAS command to be very cryptic.

Rick

9743. 100Ω -> 50Ω balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 23:43:24 UTC
From: ceo@andygardner.com
Topic: 9743 Message: 9743

Greetings from sunny New Zealand,

My current loop antenna project has a variable capacitor and the stepper motor driving it in aluminium case at the antenna. As there are a number of wires required (for wires for stepper, 4 wires for optosensor limit detectors) I decided to use a DVI cable and connectors filched off old DVI video cards. I picked this because you can easily find high quality DVI cables lying around the house (well, my house anyway!) and they have 4 x 100Ω balanced individually foil shielded pairs along with extra wires. The good ones have ferrite chokes at each end of the cable too.

So I plan to have a pick up coil on the antenna that is 100Ω impedance to feed directly into the DVI cable, but when the cable gets to the other end (the controller box) I need a 100Ω-50Ω balun to feed the R8.

Looking for recommendations on the best balun design to use. Hoping to construct it using a toroid pilfered from old electronics gear - probably one that was used for interference suppression on a data cable run, rather than one used in a switch mode PSU.

Thanks in advance.

9744. Re: [loopantennas] Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-28 03:19:03 UTC
From: John Popelish
Topic: 9584 Message: 9744

On 02/27/2013 06:11 PM, redsp wrote:
> jpopelish@...> wrote:
>>... includes
>> significant core loss that shows up as something like
>> a parallel resistance across the secondary, because the
>> high permeability core is quite conductive). That is
>> why the entire system should not be tuned at the output
>> of the transformer. You don't want all the resonant
>> stored energy to have to slosh back and forth through
>> that core. Most of the inductive energy should be
>> stored only in the high Q antenna coil.
>
> But is this core loss included in the simulation? I
> don't see a term for that anywhere.

If you put a resistor across the secondary, you have a rough approximation of it. I think something in the decade of 1meg is close. You might also add a series resistance to that 300 turn secondary, since it is wound of pretty fine wire. Something about two times the specified DC resistance (to account for skin effect) might be about right. Of course, you can use the alternate Chan model of a core and get a lot closer for the distortion across the waveform, but that adds little to an AC analysis.

> Actually I get a higher Q by adding some capacitance to
> the secondary which increases the secondary currrent, but
> requires a lowering of the primary capacitance. I assume
> this is because the reduced primary current raises the Q
> of the primary circuit. So in the simulation I think the
> Q of the secondary is higher than the Q of the primary.

This is especially true if the transformer primary is connected in parallel to the loop and tuning capacitor (voltage transformer, rather than current transformer), since resonating the transformer will raise its overall impedance at the signal frequency.

(snip)
> Some folks use a dual boot arrangement. Others run one
> OS and then run another in a sandbox under the first. I
> expect this takes a pretty good machine with lots of
> memory. Not something I have.

I have a pretty spiffy machine. So I think it will handle Wine okay, once I get it installed, correctly.

> I worked on the measurement scripts a bit today. I am
> trying to measure all three features I see. I can
> calculate the frequency of the Vcap null exactly. That
> is the resonance of secondary inductance and capacitance.
> I can get within 5% of the first peak which is due to the
> total capacitance and the sum of the two inductors in the
> primary. But it is always low. I can't come up with any
> explanation of the higher frequency peak. No combination
> of inductance and capacitance in the circuit seems to
> produce this. I'm not comfortable not understanding what
> the simulation is telling me. That is rather the idea I
> think, to see what it does and make sure it fits with the
> model. Otherwise the model may not be right. Obviously
> I don't understand the model.

I am not sure I am following you, here. We may have to get
together via email and work on the sane schematic, at the
same time.
>
> I don't fully understand the field coil circuit. Why did
> you pick 1 mH for the radiator L4? I have no idea how to
> include that into the calculations and I don't know if
> this changes the signal strength value, not that it
> necessarily is a meaningful number anyway. But in my
> original circuit I assume the generator is the "untuned"
> voltage the antenna would receive and so the signal
> strength at Vout would be a realistic estimate of the
> level at the receiver input. I will try the other two
> methods of stimulating the circuit.

The field coil inductance and driving current source are
completely arbitrary. They both function only as a signal
scale. It would probably be a good idea to pick a field
coil inductance and current so that a plain loop inductance,
possibly terminated with a meg ohm resistor or some such,
produced a 0db output at 60kHz. Then all other signal
strengths would be equivalent to gains.

> I also have some trouble getting LTspice to display
> "measured" data in meaningful ways. If it displays some
> data in dB, then *all* data is measured in dB. So if you
> want to see a straight numbmer it has to be reversed to
> anti-dB before being displayed. That is what some of my
> measurement statements were doing. lol
>
> If you are interested I've uploaded a new file to your
> directory. Antenna_trans_LTspice.zip This contains the
> schematic with the radiator inductance set to match the
> antenna coil inductance along with the measurement file
> that can be run from the menu, File - Execute MEAS.
> Script. It is also in the schematic as commands, but the
> measure script can be run subsequent to the simulation.

>
> I'm learning a few things about LTspice, but I still find
> the .MEAS command to be very cryptic.

I'll take a look. I have more problems with measure
commands than all other features of LTspice, put together.

I'm hoping for an expanded help section on this feature,
eventually.

--
Regards,

John Popelish

9745. Re: Loop Antenna for WWVB LF Receiver

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-28 03:57:00 UTC
From: jpopelish
Topic: 9584 Message: 9745

<jpopelish@...> wrote:
> redsp wrote:
(snip)
> > I don't fully understand the field coil circuit. Why did
> > you pick 1 mH for the radiator L4? I have no idea how to
> > include that into the calculations and I don't know if
> > this changes the signal strength value, not that it
> > necessarily is a meaningful number anyway. But in my
> > original circuit I assume the generator is the "untuned"
> > voltage the antenna would receive and so the signal
> > strength at Vout would be a realistic estimate of the
> > level at the receiver input. I will try the other two
> > methods of stimulating the circuit.
>
> The field coil inductance and driving current source are
> completely arbitrary. They both function only as a signal
> scale. It would probably be a good idea to pick a field
> coil inductance and current so that a plain loop inductance,
> possibly terminated with a meg ohm resistor or some such,
> produced a 0db output at 60kHz. Then all other signal
> strengths would be equivalent to gains.

I added a second loop inductor to the schematic, loaded only with 1meg and also coupled to both the field coil and the antenna coil by the same 0.001 K factor, and it looks like a field coil inductance of about 80mHy produces a 0db signal across that calibration inductor at 60 kHz. It also shows about a +-0.2 db signal swing as the antenna circuit passes through resonance, so this gives you an idea of how approximate the field coil is at representing a far field. Perhaps it would be a bit better to lower the K factor to 0.0001 and raise the field coil inductance to 800mHy. (a 0.02db coupling of the antenna back into the field coil.)

--
Regards,

John Popelish

9746. Re: [loopantennas] 100Ω -> 50Ω balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-28 04:26:27 UTC
From: Tony Magon
Topic: 9743 Message: 9746

Hi Andy

Have a look at the G0CWT website . Two supressor cores off TV monitor leads should be ok

Regards

Tony Magon VK2IC

On Thu, Feb 28, 2013 at 10:43 AM, ceo@...
<ceo@...>wrote:

> **
>
>
>
> Greetings from sunny New Zealand,
>
> My current loop antenna project has a variable capacitor and the stepper
> motor driving it in aluminium case at the antenna. As there are a number of
> wires required (for wires for stepper, 4 wires for optosensor limit
> detectors) I decided to use a DVI cable and connectors filched off old DVI
> video cards. I picked this because you can easily find high quality DVI
> cables lying around the house (well, my house anyway!) and they have 4 x
> 100Ω balanced individually foil shielded pairs along with extra wires. The
> good ones have ferrite chokes at each end of the cable too.
>
> So I plan to have a pick up coil on the antenna that is 100Ω impedance to
> feed directly into the DVI cable, but when the cable gets to the other end
> (the controller box) I need a 100Ω-50Ω balun to feed the R8.
>
> Looking for recommendations on the best balun design to use. Hoping to
> construct it using a toroid pilfered from old electronics gear - probably
> one that was used for interference suppression on a data cable run, rather
> than one used in a switch mode PSU.
>
> Thanks in advance.
>
>
>

9747. Omnidirectional Dual Loop Shortwave Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-27 13:32:56 UTC
From: Lionel
Topic: 9747 Message: 9747

Hi all,

I am new in this group.

Is possible have omnidirectional pattern combining two receiving loop antenna (mounted 90 feg each one like crossed loop) with passive antenna combiner (reverse splitter antenna) ?

Regards,

Lio, IZ2BKO

9748. Re: [loopantennas] Omnidirectional Dual Loop Shortwave Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-28 10:10:55 UTC
From: Andrew Ikin
Topic: 9747 Message: 9748

Lionel,

With two crossed loops you will also need a 90 degree combiner to achieve an omni-directional pattern. The problem here is, 90 degree combiners don't have a very wide bandwidth.

The other method is to use an SDR that has two antenna inputs and allows for the phase difference to be set at 90 degrees. This will also require a matched pair of loop antennas.

I have supplied ALA1530 loop antennas to some SDR manufactures for this purpose and for DF.

One other method is to build an up-conversion receiver with using 2 Mixers; each one uses the same LO but with a 90 degree phase difference. Both IFs are combined and down converted with another mixer and the same LO and then fed to the receiver. I guess the SDR method is easier!!!

Mount a single loop horizontally approx. 25ft above the ground to provide a near omni-directional pattern.

Lastly, do nothing, because HF signals tend to arrive at medium and high angles, where the loops pattern is omni-directional.

73

Andrew Ikin

9749. Re: [loopantennas] Omnidirectional Dual Loop Shortwave Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-28 14:14:12 UTC
From: Chris Trask
Topic: 9747 Message: 9749

>
>I am new in this group.
>
>Is possible have omnidirectional pattern combining two receiving loop antenna (mounted 90 feg each
>one like crossed loop) with passive antenna combiner (reverse splitter antenna) ?
>

Almost. You'll need a 90 degree (quadrature) combiner to get the proper phasing for an omnidirectional pattern.

Chris

9750. Re: [loopantennas] 100Ω -> 50Ω balun ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-28 14:25:43 UTC
From: ceo@andygardner.com
Topic: 9743 Message: 9750

Thanks Tony, I'll take a look.

Cheers,

On 28/02/2013, at 5:26 PM, Tony Magon wrote:

> Hi Andy
>
>
> Have a look at the G0CWT website . Two supressor cores off TV monitor leads should be ok
>
>
> Regards
>
> Tony Magon VK2IC

9751. Here is a Link for Transmitting Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-02-28 19:01:27 UTC
From: Yaakov Nahum Ben-Avraham - Life Member AR
Topic: 9751 Message: 9751

Here is a link for transmitting loop antennas.

http://www.qrz.com/db/VE7ALQ

as used by Radio Amateurs.

73's de Yaakov, VE7ALQ

--
(Life) Member www.ARRL.org - Amateur Radio Relay Leaque
Member www.RAC.ca - Why can't I join them for "Life"?
Member www.FISTS.org - Morse Code Fist Number 11117

9752. Re: [loopantennas] Here is a Link for Transmitting Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-01 04:01:39 UTC
From: dick.bingham
Topic: 9751 Message: 9752

Hello Yaakov

Nice collection of useful information . . One thing "I" would change is ===>
λ=40m F=07mHz R=.004Ω RL=.025Ω ΔW=04kHz X=046Ω E=14% Q=1600
λ=30m F=10mHz R=.017Ω RL=.029Ω ΔW=07kHz X=067Ω E=37% Q=1500
λ=20m F=14mHz R=.064Ω RL=.035Ω ΔW=15kHz X=092Ω E=65% Q=930
λ=15m F=21mHz R=.320Ω RL=.043Ω ΔW=50kHz X=140Ω E=89% Q=390

Is the use of "m" instead of "M" in the frequency list above. "M" for me implies mega and "m"
milli . . .

An addition to your list of helpful formulae might somehow include something about Path-Loss.
The one I use is PL = 22 + 20 * Log (# of wavelengths) . . . You can calculate this one "in your head" to a reasonable approximation . . .

I live in a CC&R location and will be fabricating a loop antenna soon. Your info should be very helpful.

Tnx and 73

Dick/w7wkr. CN97uj

Sent from my iPad

On Feb 28, 2013, at 11:01 AM, "Yaakov Nahum Ben-Avraham - Life Member ARRL - www.yaakov.ca - 1 (604) 875-13-14" <nkvd@shaw.ca> wrote:

> Here is a link for transmitting loop antennas.
>
> http://www.qrz.com/db/VE7ALQ
>
> as used by Radio Amateurs.
>
> 73's de Yaakov, VE7ALQ
>
> --
> (Life) Member www.ARRL.org - Amateur Radio Relay Leaque
> Member www.RAC.ca - Why can't I join them for "Life"?
> Member www.FISTS.org - Morse Code Fist Number 11117
>
>

9753. Re: Useful Calculator for Loop Antenna Design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-01 04:35:35 UTC
From: Yaakov Nahum Ben-Avraham - Life Member AR
Topic: 9751 Message: 9753

I suggest that you google

loopcalc.exe

which is a program written
by KI6GD when you are
designing your loop
for CC&R location.

73's de Yaakov, VE7ALQ

--
(Life) Member www.ARRL.org - Amateur Radio Relay Leaque
Member www.RAC.ca - Why can't I join them for "Life"?
Member www.FISTS.org - Morse Code Fist Number 11117

9754. Re: [loopantennas] Re: Useful Calculator for Loop Antenna Design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-01 06:01:35 UTC
From: Dick Bingham
Topic: 9751 Message: 9754

Thank you - I will check it out..

Dick/w7wkr

On Thu, Feb 28, 2013 at 8:35 PM, Yaakov Nahum Ben-Avraham - Life Member
ARRL - www.yaakov.ca - 1 (604) 875-13-14 <nkvd@...> wrote:

> **
>
>
> I suggest that you google
>
> loopcalc.exe
>
> which is a program written
> by KI6GD when you are
> designing your loop
> for CC&R location.
>
> 73's de Yaakov, VE7ALQ
>
> --
> (Life) Member www.ARRL.org - Amateur Radio Relay Leaque
> Member www.RAC.ca - Why can't I join them for "Life"?
> Member www.FISTS.org - Morse Code Fist Number 11117
>
>
>

--
Dick Bingham - W7WKR
Stehekin, WA CN98pi

OR

East Wenatchee, WA CN97uj

9755. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-02 00:38:08 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 9755

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

9756. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-02 00:38:08 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 9756

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

9757. Question on MFJ - 1789 Loop Antenna for SWL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-04 02:13:18 UTC
From: n2pkt
Topic: 9757 Message: 9757

I was thinking of purchasing the MFJ-1786 Loop Antenna to use for Shortwave Listening (in addition) to having it as my primary amateur radio antenna. I want to use it in my attic which is about 50 foot up on a high elevation. My present dipole grabs a lot of static from electrical sources. I thought this antenna would react similiar to Shortwave Magnetic Loop Antenna Pixel RF Pro 1B. Is this an option that I shoild explore? It is an expensive one, but I would not mind the investment if I could work DX as well as bring in weak stations on Shortwave "without" anymore static. I would appreciate any comments or suggestions! de Lou N2PKT

9758. Re: Question on MFJ - 1789 Loop Antenna for SWL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-05 07:40:47 UTC
From: qrpbear
Topic: 9757 Message: 9758

Lou,

Before spending the money on a commercial loop antenna I suggest you try making a tuned loop out of about 10' of coax and a dual section BC band variable cap. It may well prove to be an eye-opener to you. Tuned loops, contrary to popular misconception, are NOT inherently immune to electrical interference... they are just as prone to it as a dipole or random wire in the same environment. The main attraction to a tuned loop is its narrow bandwidth which acts like a sharply tuned preselector ahead of the rf stage of your receiver. Tuned loops are also strongly influenced by objects in their near vicinity (esp. within 1 to 2 loop diameters radius).

73,

'Bear' NH7SR

--- In loopantennas@yahoogroups.com, "n2pkt" <n2pkt@...> wrote:
>
>
> I was thinking of purchasing the MFJ-1786 Loop Antenna to use for
> Shortwave Listening (in addition) to having it as my primary amateur
> radio antenna. I want to use it in my attic which is about 50 foot up on
> a high elevation. My present dipole grabs a lot of static from
> electrical sources. I thought this antenna would react similiar to
> Shortwave Magnetic Loop Antenna Pixel RF Pro 1B. Is this an option that
> I shoild explore? It is an expensive one, but I would not mind the
> investment if I could work DX as well as bring in weak stations on
> Shortwave "without" anymore static. I would appreciate any comments or
> suggestions! de Lou N2PKT
>

9759. Re: Question on MFJ - 1789 Loop Antenna for SWL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-05 16:56:55 UTC
From: vbifyz
Topic: 9757 Message: 9759

In my experience, the main advantage of any loop is the ability to NULL the interference by rotating the loop (and maybe also tilting it). Indeed, randomly placed loop outputs as much interference as a random wire.
Unfortunately, the desired orientation is band dependent, so a remotely controlled tuned loop requires two motors, one for tuning and one for rotation.

73, Mike

--- In loopantennas@yahoogroups.com, "qrpbear" <qrpbear@...> wrote:
>
> Lou,
>
> Before spending the money on a commercial loop antenna I suggest you try making a tuned loop out of about 10' of coax and a dual section BC band variable cap. It may well prove to be an eye-opener to you. Tuned loops, contrary to popular misconception, are NOT inherently immune to electrical interference... they are just as prone to it as a dipole or random wire in the same environment. The main attraction to a tuned loop is its narrow bandwidth which acts like a sharply tuned preselector ahead of the rf stage of your receiver. Tuned loops are also strongly influenced by objects in their near vicinity (esp. within 1 to 2 loop diameters radius).
>
> 73,
>
> 'Bear' NH7SR
>
> --- In loopantennas@yahoogroups.com, "n2pkt" <n2pkt@> wrote:
> >
> >
> > I was thinking of purchasing the MFJ-1786 Loop Antenna to use for
> > Shortwave Listening (in addition) to having it as my primary amateur
> > radio antenna. I want to use it in my attic which is about 50 foot up on
> > a high elevation. My present dipole grabs a lot of static from
> > electrical sources. I thought this antenna would react similiar to
> > Shortwave Magnetic Loop Antenna Pixel RF Pro 1B. Is this an option that
> > I shoild explore? It is an expensive one, but I would not mind the
> > investment if I could work DX as well as bring in weak stations on
> > Shortwave "without" anymore static. I would appreciate any comments or
> > suggestions! de Lou N2PKT
> >
>

9760. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-06 16:32:19 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 9760

```
Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /MATCHI~1.pdf
Uploaded by : everettsharp74 <everettsharp@...>
Description : Easy to make DIY Matching Transformers

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/MATCHI%7E1.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

everettsharp74 <everettsharp@...>
```

9761. Re: [loopantennas] 100Ω -> 50Ω balun ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-06 23:42:11 UTC
From: ceo@andygardner.com
Topic: 9743 Message: 9761

In the end, I took the lazy way out and decided to use an ethernet isolation transformer off a blown wireless router. Ethernet is 100Ω balanced, just like DVI, and one side has a centre tap earth.

9762. Re: Question on MFJ - 1789 Loop Antenna for SWL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-07 02:15:47 UTC
From: n2pkt
Topic: 9757 Message: 9762

--- In loopantennas@yahoogroups.com, "vbifyz" <3ym3ym@...> wrote:
>
> In my experience, the main advantage of any loop is the ability to NULL the interference by rotating the loop (and maybe also tilting it). Indeed, randomly placed loop outputs as much interference as a random wire.
> Unfortunately, the desired orientation is band dependent, so a remotely controlled tuned loop requires two motors, one for tuning and one for rotation.
>
> 73, Mike
>
> --- In loopantennas@yahoogroups.com, "qrpbear" <qrpbear@> wrote:
> >
> > Lou,
> >
> > Before spending the money on a commercial loop antenna I suggest you try making a tuned loop out of about 10' of coax and a dual section BC band variable cap. It may well prove to be an eye-opener to you. Tuned loops, contrary to popular misconception, are NOT inherently immune to electrical interference... they are just as prone to it as a dipole or random wire in the same environment. The main attraction to a tuned loop is its narrow bandwidth which acts like a sharply tuned preselector ahead of the rf stage of your receiver. Tuned loops are also strongly influenced by objects in their near vicinity (esp. within 1 to 2 loop diameters radius).
> >
> > 73,
> >
> > 'Bear' NH7SR
> >
Thank you both for your replies, If the Loop is still acceptable to static and other interference. I may look into better dipole systems
or maybe try the homebrew loop if I can locate some instructions.
For now, I will continue to look around for a better system. Thanks again! Lou N2PKT

9763. note

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-07 21:08:43 UTC
From: Coleman Lemon
Topic: 9763 Message: 9763

http://bystrzak.net/bcjmlwd/yasxtrpknxyqjty

Coleman Lemon

9764. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 07:25:46 UTC
From: hejsek2005
Topic: 4 Message: 9764

```
> File : /MATCHI~1.pdf
> Uploaded by : everettsharp74 <everettsharp@...>
>
> You can access this file at the URL:
> http://groups.yahoo.com/group/loopantennas/files/MATCHI%7E1.pdf
```

Gives an error, both from the link in the forum message
and the link emailed in yesterday's Digest:
"The requested file or directory is not found on the server"

I can't see it in the top level of the Files section
where it is supposed to be and Everett doesn't seem
to have a personal folder there, though he does have
several other files.

Please, where is this file?

9765. Re: 100Î© -> 50Î© balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 07:34:13 UTC
From: hejsek2005
Topic: 9743 Message: 9765

```
--- In loopantennas@yahoogroups.com, "ceo@..." wrote:
>I... decided to use an ethernet isolation transformer...
>Ethernet is 100Î© balanced... one side has a centre tap earth.

I can see the bal-un bit, but how did you get the 100R:50R?
```

9766. Re: [loopantennas] Re: 100Ω -> 50Ω balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 07:45:14 UTC
From: ceo@andygardner.com
Topic: 9743 Message: 9766

I'm using http://www.mingtek.tw/pdf/B-4.pdf

100Ω balanced fed into pins 14 and 16

50Ω output to R8 from pin 1

pins 4 and 13 grounded

Feel free to tell me I got it all wrong, I would not be at all surprised.

On 8/03/2013, at 8:34 PM, hejsek2005 wrote:

```
>
>
> --- In loopantennas@yahoogroups.com, "ceo@..." wrote:
> >I... decided to use an ethernet isolation transformer...
> >Ethernet is 100Î© balanced... one side has a centre tap earth.
>
> I can see the bal-un bit, but how did you get the 100R:50R?
```

9767. Re: [loopantennas] Re: 100Ω -> 50Ω balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 17:02:35 UTC
From: John Popelish
Topic: 9743 Message: 9767

On 03/08/2013 02:45 AM, ceo@... wrote:
>
> I'm using http://www.mingtek.tw/pdf/B-4.pdf
>
> 100Î© balanced fed into pins 14 and 16
>
> 50Î© output to R8 from pin 1
>
> pins 4 and 13 grounded
>
> Feel free to tell me I got it all wrong, I would not be
> at all surprised.

Transformer (and balun) impedance ratios are proportional to the square of the turns ratios. Using only half of a winding reduces the impedance by a factor of 1/4.

In concept, since a 1:2 impedance ratio requires a turns ratio of 1:sqrt(2), that impedance ratio can be only approximated.

A turns ratio of 3:2 gives an impedance ratio of 9:4 or about 100:44.44.

A turns ratio of 4:3 gives an impedance ratio of 16:9 or about 100:56.25.

A turns ratio of 5:3 gives an impedance ratio of 25:9 or about 100:36.

A turns ratio of 5:4 gives an impedance ratio of 25:16 or about 100:64.

etc.

--
Regards,

John Popelish

9768. Re: [loopantennas] Re: 100Ω -> 50Ω balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 18:28:21 UTC
From: Phil
Topic: 9743 Message: 9768

That coupled with the fact that the receiver probably doesn't have an exact 50 Ohm input Z, and of course the loop antenna Z is very likely to change over a fairly wide range anyway. So I sure wouldn't worry about some mismatch.

I have a similar setup here where I have an 88 Foot long dipole fed with ladder line (the best I can do here). It feeds an oversized 2KW 4:1 balun (oversized to minimize heating losses from changing the balun characteristics) before hitting the transmatch (MFJ949E). The balun is primarily there for balanced feed as I realize the impedance varies a great deal over the 3.5-29MHz range I use it. But it DOES perform very well on all HF bands (and I've even used it on 6M too). I've tried MANY different HF antennas in this Mobile home park (NO real estate space to speak of) and this one outperforms everything else I've tried.

Yes, some verticals were a bit better on DX (especially a Butternut HF2V I tried on 80/40), but their noise was WAY too high here.

So, I'd suggest just trying whatever matching ratio you have and see what works best for you overall.

73 de Phil, KO6BB
http://www.qsl.net/ko6bb/ (Web Page)

RADIOS:
Grundigs: S-350 (2006)& G6 (2011).
Icom: R-75 with Cascaded 250Hz CW Filters.
Kenwood: TS130S HF Transceiver (circa 1980).
Radio Shack: DX-380 digital portable (circa 1990).
Zenith: Royal-7000 Transoceanic (circa 1969).

Audio Interface: Two Mark One Earholes.
Decoder Software: Gray-matter between two ears.

ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-949E HF Tuner
Homebrew 6 Hz Audio Filter.

ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
Ratzlaff 3 Foot Active Whip at 36 Feet AGL for LF/MW
4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF

Merced, Central California, 37, 18, 37N 120, 30, 6W CM97rh

On 3/8/2013 5:02 PM, John Popelish wrote:
> On 03/08/2013 02:45 AM, ceo@... wrote:
>> I'm using http://www.mingtek.tw/pdf/B-4.pdf
>>

>> 100Î© balanced fed into pins 14 and 16
>>
>> 50Î© output to R8 from pin 1
>>
>> pins 4 and 13 grounded
>>
>> Feel free to tell me I got it all wrong, I would not be
>> at all surprised.
> Transformer (and balun) impedance ratios are proportional to
> the square of the turns ratios. Using only half of a
> winding reduces the impedance by a factor of 1/4.
>
> In concept, since a 1:2 impedance ratio requires a turns
> ratio of 1:sqrt(2), that impedance ratio can be only
> approximated.
>
> A turns ratio of 3:2 gives an impedance ratio of 9:4 or
> about 100:44.44.
>
> A turns ratio of 4:3 gives an impedance ratio of 16:9 or
> about 100:56.25.
>
> A turns ratio of 5:3 gives an impedance ratio of 25:9 or
> about 100:36.
>
> A turns ratio of 5:4 gives an impedance ratio of 25:16 or
> about 100:64.
>
> etc.
>

9769. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 21:08:21 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 9769

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Matching transformers using Binocular Core.docx
Uploaded by : everettsharp74 <everettsharp@...>
Description : Matching Transformer info usinga Binocular Core

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/Matching%20transformers%20using%20Binocul
ar%20%20Core.docx

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

everettsharp74 <everettsharp@...>

9770. Re: [loopantennas] New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 21:11:12 UTC
From: everettsharp@...
Topic: 238 Message: 9770

Sorry about, I tried uploading that file in pdf, but for some reason I could not open the file, so I deleted it. So I just uploaded it again, but in MS Word.

Everett N8CNP

In a message dated 3/8/2013 3:08:24 P.M. Central Standard Time, loopantennas@yahoogroups.com writes:

Hello,

This email message is a notification to let you know that a file has been uploaded to the Files area of the loopantennas group.

File : /Matching transformers using Binocular Core.docx
Uploaded by : everettsharp74 <_everettsharp@..._ (mailto:everettsharp@...) >
Description : Matching Transformer info usinga Binocular Core

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/Matching%20transformers%20using%20Binocular%20%20Core.docx (http://groups.yahoo.com/group/loopantennas/files/Matching%20transformers%20using%20Binocular%20%20Core.docx)

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html (http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html)
Regards,

everettsharp74 <_everettsharp@..._ (mailto:everettsharp@...) >

9771. Re: 100Î© -> 50Î© balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 21:30:38 UTC
From: hejsek2005
Topic: 9743 Message: 9771

--- In loopantennas@yahoogroups.com, John Popelish <jpopelish@...> wrote:
> On 03/08/2013 02:45 AM, ceo@... wrote:
> > I'm using http://www.mingtek.tw/pdf/B-4.pdf

After installing a 11 MB Chinese font file :-),
I find there are _five_ transfomer diagrams there
- you don't tell us which you use.

> > 100Ã□Â© balanced fed into pins 14 and 16
> > 50Ã□Â© output to R8 from pin 1
> > pins 4 and 13 grounded

Your pinouts only make any sense for two of them:
HN1664CG & HN1674CG. Let's hope it's the former.

> Transformer (and balun) impedance ratios are proportional to
> the square of the turns ratios. Using only half of a
> winding reduces the impedance by a factor of 1/4.

John has explained it well. A centre-tapped (usually
bi-filar) balun transformer is the way to connect an
FM dipole made of 300R twin feeder to the 75R coax
antenna input on the typical home hi-fi.

4:1 impedance ratio: half the voltage at 2x the current,
or 100R:25R. Also, if you are unlucky enough to have a
HN1674CG, you have the inductance of a half-connected
and un-specified current balun to add into the mix.

If you had access to all the transformer terminals
you could achieve a 3:2 or 4:3 turns ratio for one
of John's 'near miss' matches, but I imagine these
commodity transformers are inscrutably potted in
resin for their Ethernet isolation task.

However, does it matter for a receiver? There are
no damaging consequences of mismatch as in a Tx,
the coupling loop probably isn't 100R either, and
the only result might be transmission line
transformer effects when the cable gets to be
near an odd number of quarter wavelengths.

Better an antenna that works (mostly) than none.

Regards. LenW

9772. Re: [loopantennas] Re: 100Ω -> 50Ω balun?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-08 23:02:07 UTC
From: John Popelish
Topic: 9743 Message: 9772

On 03/08/2013 04:30 PM, hejsek2005 wrote:

> John has explained it well. A centre-tapped (usually
> bi-filar) balun transformer is the way to connect an
> FM dipole made of 300R twin feeder to the 75R coax
> antenna input on the typical home hi-fi.
>
> 4:1 impedance ratio: half the voltage at 2x the current,
> or 100R:25R. Also, if you are unlucky enough to have a
> HN1674CG, you have the inductance of a half-connected
> and un-specified current balun to add into the mix.
>
> If you had access to all the transformer terminals
> you could achieve a 3:2 or 4:3 turns ratio for one
> of John's 'near miss' matches, but I imagine these
> commodity transformers are inscrutably potted in
> resin for their Ethernet isolation task.
>
> However, does it matter for a receiver? There are
> no damaging consequences of mismatch as in a Tx,
> the coupling loop probably isn't 100R either, and
> the only result might be transmission line
> transformer effects when the cable gets to be
> near an odd number of quarter wavelengths.
>
> Better an antenna that works (mostly) than none.

I think you should compare the result you get with one of these Ethernet baluns with a home made unit made of 5 strands of something like 30 ga wire wrap wire, twisted together and wrapped a few times through a ferrite core.

Then you connect all those strands in series. The first 4 of them form the 100 ohm primary and the last 3 form the secondary. Two of those strands are part of both the primary and also part of the secondary. The end of strand 2 (which is the beginning of strand 3) is the ground point.

This arrangement gives you a 16:9 = 100:56 ohm balun.

--
Regards,

John Popelish

9773. Re: [loopantennas] Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-09 04:06:47 UTC
From: Adrian Flynn
Topic: 4 Message: 9773

I have the same question.
Adrian

On Fri, Mar 8, 2013 at 2:25 AM, hejsek2005 <novost@...> wrote:

> **
>
>
>
>
> > File : /MATCHI~1.pdf
> > Uploaded by : everettsharp74 <everettsharp@...>
> >
> > You can access this file at the URL:
> > http://groups.yahoo.com/group/loopantennas/files/MATCHI%7E1.pdf
>
> Gives an error, both from the link in the forum message
> and the link emailed in yesterday's Digest:
> "The requested file or directory is not found on the server"
>
> I can't see it in the top level of the Files section
> where it is supposed to be and Everett doesn't seem
> to have a personal folder there, though he does have
> several other files.
>
> Please, where is this file?
>
>
>

9774. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-09 05:07:34 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 9774

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /MatchingTransformersUsingBinocularCore.pdf
Uploaded by : alienrelics <alienrelics@...>
Description : Matching Transformer info using a Binocular Core by Everett N8CNP

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/MatchingTransformersUsingBinocularCore.pd
f

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

alienrelics <alienrelics@...>

9775. Re: Question on MFJ - 1789 Loop Antenna for SWL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-09 15:38:50 UTC
From: the_dalcassian
Topic: 9757 Message: 9775

Hi Lou,

I have purchased the MFJ 1786 & the Remote Controller (Necessary), I am delighted with it. Have worked the USA & Argentina on 5W at -20DB ... on JT65A. It is perfect for the digital modes as there is not much changing of frequency. I have mine at 15 foot above the ground (Outside) mounted horizontally. It will soon be at 35 feet mounted Horizontally in that polarization the nulls are vertical i.e. like wheel hub. That way I dont need a rotator. Anything of frequency by a small amount it does not pick up So it is very quite and pulls in anything I need when tuned. I suggest you keep a Dipole for general listening and then once decided just where to operate switch to the Mag Loop. Using the Digi modes as I do there is not so much jumping around as most of my contact are on spot frequencies. The MAG Loop is very selective and should significantly reduce your noise problem.

Kind Regards Rodger (G8HLH)

--- In loopantennas@yahoogroups.com, "n2pkt" <n2pkt@...> wrote:
>
>
> I was thinking of purchasing the MFJ-1786 Loop Antenna to use for
> Shortwave Listening (in addition) to having it as my primary amateur
> radio antenna. I want to use it in my attic which is about 50 foot up on
> a high elevation. My present dipole grabs a lot of static from
> electrical sources. I thought this antenna would react similiar to
> Shortwave Magnetic Loop Antenna Pixel RF Pro 1B. Is this an option that
> I shoild explore? It is an expensive one, but I would not mind the
> investment if I could work DX as well as bring in weak stations on
> Shortwave "without" anymore static. I would appreciate any comments or
> suggestions! de Lou N2PKT
>

9777. Re: Question on MFJ - 1789 Loop Antenna for SWL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-11 23:05:36 UTC
From: William Hein
Topic: 9757 Message: 9777

I recently moved to a new QTH and my "shack" here is mostly underground thus this superb directional low band rx antenna, which can sit on your rig or operating desk, is no longer suitable for my situation and is therefore for sale.

It is the latest and greatest version - the QUANTUM QX LOOP v2.0+ from Radio Plus Electronics - and includes plug in head units for three bands:

Long wave (160 - 530 kHz)
Medium wave (530 - 1700+ kHz)
Tropical band (1.8 - 6.2 MHz)

Easy to null QRM and peak weak signals by rotating or tilting the ferrite head unit which feeds a double balanced 40+ dB JFET/MOSFET preamp. Q-Multiplication allows super tight tuning. Runs on 9 - 15 VDC thru 2.5mm miniplug or 9 VDC battery.

More info:

http://www.dxtools.com/QXv2+.htm

Cost over $400 new and is still in EX condition. Will sell for $299 plus shipping via USPS, UPS or FedEx (your choice) or you pick up near Grand Junction CO.

Non-smoking shack. PayPal preferred but personal check OK with delay for clearance. Can send photo on request.

73
Bill

William Hein, AA7XT
ex-AA4XT, NT1Y, AA6TT, KC6EDP

Blog AA7XT.com

ARRL, CSVHF & AMSAT Life Member
UKSMG & QCWA Member
1st licensed 1969 - WN6NDC

1st W to OH0 6m QSO
1st North America to Asia 60m QSO
Founder TopBand email reflector

Tel +1 (970) 628-5120
Email Bill.AA7XT@...
Loc: DM59pa
AIM / iChat / iMessage william.hein@...
Skype williamhein

9778. New version of my Antenna Tuner project

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-19 02:48:58 UTC
From: pu2clr
Topic: 9778 Message: 9778

Hello everybody,

I would like to share the new version of my Antenna Tuner project.

Who liked the video "Magnetic Loop Antenna controlled by Arduino and infrared", will appreciate my last one.

Now I inserted an encoder to increase the possibilities to handle the antenna tuner. I also switch a Stepper Motor to a Servo.

To watch my video, access this link: http://youtu.be/zD-wKD19_8U

73.
PU2CLR,
Ricardo.

9779. Litz Wire

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-23 11:48:11 UTC
From: Sudipta, VU3TKG
Topic: 9779 Message: 9779

Hi all!
Can any body tell me as to how do I remove insulation from Litz Wires and solder?
Many thanks,
73
SG

9780. Re: Litz Wire

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-23 13:26:03 UTC
From: kugellagers
Topic: 9779 Message: 9780

It just melts away as you solder. Keep your iron on longer than normal to burn aways the coating.

Make sure you heat it enough for all the little wires to get coated with the solder or the the Litz wire will not be as effective.

John
];')

--- In loopantennas@yahoogroups.com, "Sudipta, VU3TKG" <oneghose@...> wrote:
>
> Hi all!
> Can any body tell me as to how do I remove insulation from Litz Wires and solder?
> Many thanks,
> 73
> SG
>

9781. Circuit needed to switch IC-718 to receiving loop and then to transmit antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-24 14:14:50 UTC
From: p1jn3v11
Topic: 9781 Message: 9781

I have a high noise problem due to high tension power transmission lines nearby. The IC-718 DSP noise filter does not do enough quieting.

I need a circuit that can allow the loop to be used on receive only

Thanks

Steve
KF7ZFC

9782. Re: Circuit needed to switch IC-718 to receiving loop and then to transmit antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 12:35:50 UTC
From: m0dvo
Topic: 9781 Message: 9782

Steve,

The ACC connector has two pins which will help you - Pin 3 goes to ground on transmit and pin 8 supplies 13.8 volts at up to 1 amp.

Hang a coax changeover relay coil (12v, find on eBay or suplus dealer) between them to switch the two feeds to the 718's antenna socket.

An ordinary 12v power relay from any component supplier will do the job just as well if you want to build something yourself.

Mike M0DVO

--- In loopantennas@yahoogroups.com, "p1jn3v11" <p1jn3v11@...> wrote:
>
> I have a high noise problem due to high tension power transmission lines nearby. The IC-718 DSP noise filter does not do enough quieting.
>
> I need a circuit that can allow the loop to be used on receive only
>
> Thanks
>
> Steve
> KF7ZFC
>

9783. Re: Circuit needed to switch IC-718 to receiving loop and then to transmit antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 14:06:23 UTC
From: tenorman1952
Topic: 9781 Message: 9783

--- In loopantennas@yahoogroups.com, "p1jn3v11" <p1jn3v11@...> wrote:
>
> I have a high noise problem due to high tension power transmission lines nearby. The IC-718 DSP noise filter does not do enough quieting.
>
> I need a circuit that can allow the loop to be used on receive only
>
> Thanks
>
> Steve
> KF7ZFC
>

Don't build, just buy an MFJ-1707.

http://www.mfjenterprises.com/Product.php?productid=MFJ-1707

I used the similar MFJ-1708 for switching my antenna between the 718 used for transmit, and the Icom R75 for receive. Worked very reliably, never a problem.

The 1707 looks to be a nearly identical circuit, but switched one radio between antennas instead of the other way around.

Paul - AE5JU

9784. RF Sensing Circuit for use with Receive ONLY antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 14:11:40 UTC
From: Bill McCourt - WF1L
Topic: 9784 Message: 9784

A ham in Indiana manufactures a series of boxes for use with beverage antennas some with amplification and others without but they have an rf sensing switch over circuit built into them to allow a receive only antenna to be used with a transceiver without a separate receive only antenna connection. I believe they're sold thru Radioworks and have his 9 call sign in the index tab.

I use one with my 160/80M receive only loop and it has the rf relay built in and works great! Have had it for several years now.

Good luck,

Bill - WF1L

From: "loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Monday, March 25, 2013 8:04 AM
Subject: [loopantennas] Digest Number 2222

Loop Antenna News and Information Forum

Loop Antenna News and Information Forum Group
1 New Message
Digest #2222

1
Circuit needed to switch IC-718 to receiving loop and then to trans by "p1jn3v11" p1jn3v11
Message
1
Circuit needed to switch IC-718 to receiving loop and then to trans
Sun Mar 24, 2013 8:48 am (PDT) . Posted by:
"p1jn3v11" p1jn3v11
I have a high noise problem due to high tension power transmission lines nearby. The IC-718 DSP noise filter does not do enough quieting.

I need a circuit that can allow the loop to be used on receive only

Thanks

Steve
KF7ZFC

Reply to sender . Reply to group . Reply via Web Post . All Messages (1) . Top ^
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>
View All Topics
>
Create New Topic

>
7 New Members
>
We are making changes based on your feedback, Thank you !
Submit Feedback
>
The Yahoo! Groups Product Blog
Check it out!
>
GROUP FOOTER MESSAGE
If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!

CHANGE SETTINGS
>
TERMS OF USE
>
UNSUBSCRIBE
>

9785. Re: RF Sensing Circuit for use with Receive ONLY antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 18:48:37 UTC
From: newwf1l
Topic: 9784 Message: 9785

His call is KD9SV and his "Front End Saver" electronic relay is sold thru RADIOWARE and not Readio Works. Sorry for the foulup.

Funny how well your memory works after you hit the Send button...

Bill - WF1L

--- In loopantennas@yahoogroups.com, Bill McCourt - WF1L <wemccourt@...> wrote:
>
> A ham in Indiana manufactures a series of boxes for use with beverage antennas some with amplification and others without but they have an rf sensing switch over circuit built into them to allow a receive only antenna to be used with a transceiver without a separate receive only antenna connection. I believe they're sold thru Radioworks and have his 9 call sign in the index tab.
>
> I use one with my 160/80M receive only loop and it has the rf relay built in and works great! Have had it for several years now.
>
> Good luck,
>
> Bill - WF1L
>
>
>
> _____
> From: "loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
> To: loopantennas@yahoogroups.com
> Sent: Monday, March 25, 2013 8:04 AM
> Subject: [loopantennas] Digest Number 2222
>
>
> Loop Antenna News and Information Forum
>
> Loop Antenna News and Information Forum Group
> 1 New Message
> Digest #2222
>
> 1
> Circuit needed to switch IC-718 to receiving loop and then to trans by "p1jn3v11" p1jn3v11
> Message
> 1
> Circuit needed to switch IC-718 to receiving loop and then to trans
> Sun Mar 24, 2013 8:48 am (PDT) . Posted by:
> "p1jn3v11" p1jn3v11
> I have a high noise problem due to high tension power transmission lines nearby. The

IC-718 DSP noise filter does not do enough quieting.
>
> I need a circuit that can allow the loop to be used on receive only
>
> Thanks
>
> Steve
> KF7ZFC
>
>
> Reply to sender . Reply to group . Reply via Web Post . All Messages (1) . Top ^
> Visit Your Group
> >
> View All Topics
> >
> Create New Topic
> >
> 7 New Members
> >
> We are making changes based on your feedback, Thank you !
> Submit Feedback
> >
> The Yahoo! Groups Product Blog
> Check it out!
> >
> GROUP FOOTER MESSAGE
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!
>
> CHANGE SETTINGS
> >
> TERMS OF USE
> >
> UNSUBSCRIBE
> >
>

9786. Various TOROID Winding Configurations

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 19:09:20 UTC
From: Garey Wittich
Topic: 9786 Message: 9786

There are various Toroid winding configurations - Bifilar, Overlapping, Autotransformer, Opposite-side.

How do you know which one is best to use ????

What are the Pros /Cons of the different winding configurations ?????

Many THANKS,

Garey Wittich Santa Monica, CA Palstar R30A + Windom Antenna

9787. Re: [loopantennas] RF Sensing Circuit for use with Receive ONLY antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 14:39:54 UTC
From: p1jn3v11@...
Topic: 9784 Message: 9787

Thanks Bill

Steve

p1jn3v11@...

-----Original Message-----
From: Bill McCourt - WF1L <wemccourt@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Mon, Mar 25, 2013 7:12 am
Subject: [loopantennas] RF Sensing Circuit for use with Receive ONLY antennas

A ham in Indiana manufactures a series of boxes for use with beverage antennas some with amplification and others without but they have an rf sensing switch over circuit built into them to allow a receive only antenna to be used with a transceiver without a separate receive only antenna connection. I believe they're sold thru Radioworks and have his 9 call sign in the index tab.

I use one with my 160/80M receive only loop and it has the rf relay built in and works great! Have had it for several years now.

Good luck,

Bill - WF1L

From: "loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Monday, March 25, 2013 8:04 AM
Subject: [loopantennas] Digest Number 2222

Loop Antenna News and Information Forum Group

1 New Message

Digest #2222

1

Circuit needed to switch IC-718 to receiving loop and then to trans by "p1jn3v11" p1jn3v11

Message

1

Circuit needed to switch IC-718 to receiving loop and then to trans

Sun Mar 24, 2013 8:48 am (PDT) . Posted by:

"p1jn3v11" p1jn3v11

I have a high noise problem due to high tension power transmission lines nearby. The IC-718 DSP noise filter does not do enough quieting.

I need a circuit that can allow the loop to be used on receive only

Thanks

Steve
KF7ZFC

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7 New Members

>

We are making changes based on your feedback, Thank you !

Submit Feedback

>

The Yahoo! Groups Product Blog

Check it out!

>

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If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
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You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!

CHANGE SETTINGS

>

TERMS OF USE

>

UNSUBSCRIBE

>

9788. Re: [loopantennas] Re: Circuit needed to switch IC-718 to receiving loop and then to transmit antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 14:41:47 UTC
From: p1jn3v11@...
Topic: 9781 Message: 9788

Thanks Paul

Steve

-----Original Message-----
From: tenorman1952 <tenorman1952@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Mon, Mar 25, 2013 7:06 am
Subject: [loopantennas] Re: Circuit needed to switch IC-718 to receiving loop and then to transmit antenna

--- In loopantennas@yahoogroups.com, "p1jn3v11" <p1jn3v11@...> wrote:
>
> I have a high noise problem due to high tension power transmission lines nearby. The IC-718 DSP noise filter does not do enough quieting.
>
> I need a circuit that can allow the loop to be used on receive only
>
> Thanks
>
> Steve
> KF7ZFC
>

Don't build, just buy an MFJ-1707.

http://www.mfjenterprises.com/Product.php?productid=MFJ-1707

I used the similar MFJ-1708 for switching my antenna between the 718 used for transmit, and the Icom R75 for receive. Worked very reliably, never a problem.

The 1707 looks to be a nearly identical circuit, but switched one radio between antennas instead of the other way around.

Paul - AE5JU

9789. Re: [loopantennas] Re: Circuit needed to switch IC-718 to receiving loop and then to transmit antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 14:43:16 UTC
From: p1jn3v11@...
Topic: 9781 Message: 9789

Thanks Mike

Looks like the easiest way.

Steve

-----Original Message-----
From: m0dvo <mike.maguire@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Mon, Mar 25, 2013 5:35 am
Subject: [loopantennas] Re: Circuit needed to switch IC-718 to receiving loop and then to transmit antenna

Steve,

The ACC connector has two pins which will help you - Pin 3 goes to ground on transmit and pin 8 supplies 13.8 volts at up to 1 amp.

Hang a coax changeover relay coil (12v, find on eBay or suplus dealer) between them to switch the two feeds to the 718's antenna socket.

An ordinary 12v power relay from any component supplier will do the job just as well if you want to build something yourself.

Mike M0DVO

--- In loopantennas@yahoogroups.com, "p1jn3v11" <p1jn3v11@...> wrote:
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>
> I need a circuit that can allow the loop to be used on receive only
>
> Thanks
>
> Steve
> KF7ZFC
>

9790. Re: Various TOROID Winding Configurations

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-26 00:02:31 UTC
From: ebkeller5
Topic: 9786 Message: 9790

--- In loopantennas@yahoogroups.com, Garey Wittich <gareywittich2000@...> wrote:
>
> There are various Toroid winding configurations - Bifilar, Overlapping, Autotransformer, Opposite-side.
>
> How do you know which one is best to use ????
>
> What are the Pros /Cons of the different winding configurations ?????
>
> Many THANKS,
>
> Garey Wittich Santa Monica, CA Palstar R30A + Windom Antenna
>
Garey,probably the most comprehensive report on this theme is here:http://www.dxing.info/equipment/impedance_matching_bryant.pdf

Eb.

9791. Re: Various TOROID Winding Configurations

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-26 00:16:16 UTC
From: ebkeller5
Topic: 9786 Message: 9791

You may also find this useful:
http://www.dxing.info/equipment/rolling_your_own_bryant.dx

--- In loopantennas@yahoogroups.com, Garey Wittich <gareywittich2000@...> wrote:
>
> There are various Toroid winding configurations - Bifilar, Overlapping, Autotransformer, Opposite-side.
>
> How do you know which one is best to use ????

9792. Velocity cable factor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-25 21:40:40 UTC
From: clement F59465
Topic: 9792 Message: 9792

Hi to all,

I seek to know the velocity factor of this type of flexible electrical cable
:

H07V-K 2.5mm Stranded

Thank you
Cordially

--

73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube <http://www.youtube.com/F59465swl>

9793. QSO with my Magnetic Loop Antenna (QRP)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-26 12:15:58 UTC
From: pu2clr
Topic: 9793 Message: 9793

Last week I posted a video on youtube about my home-brew Antenna Tuner - "Arduino, IR and Encoder controlling Magnetic Loop Antenna Tuner"

Yesterday I posted another video showing this system working (QSO with Magnetic Loop Antenna).

The first QSO is with EA2ACK, Jose, Cadrete (ZARAGOZA), Spain, 4964 mil (7990km) away from my city (Brasília/Brazil).

The second QSO is with PU5DUD, Renato, Blumenal, Santa Catarina, Brazil, 451 mil (727 km) away from Brasilia.

I used a FT817ND with 5 Watts.

I would like to share with you my last video on my Youtube channel.

The link to my youtube channel is:
https://www.youtube.com/user/pu2clr/videos?view=0&flow=grid

The link to my last video is: https://www.youtube.com/watch?v=ylhLfB0XhZU

The link about Antenna Tuner assembly is: https://www.youtube.com/watch?v=zD-wKD19_8U

You can also look for PU2CLR on Youtube web page.

73.
PU2CLR.
Ricardo.

9794. Automatic Antenna Tuner for QRP controlled by Android and Arduino

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-27 22:52:19 UTC
From: pu2clr
Topic: 9794 Message: 9794

Hello Everybody.

I would like to show you my homebrew Magnetic Loop Antenna working with a homebrew Antenna Tuner controlled by Android and Arduino.

Some times working with a Magnetic Loop Antenna can become uncomfortable because you have to tune the antenna every band or even frequency that you want to use.
In my antenna, I introduced a system that gives me the possibility to tune it remotely.

The main motivation to make a remote control for Magnetic Loop Antenna is to improve the performance tuning process.
I have observed that when we operate close to the antenna, in general, it affects the accuracy.

Operate away from the antenna decreases exposure to the electromagnetic field and also the risks with the high voltage of the capacitor.

In this project, I chose to control my antenna from a Mobile Phone with Android System. In addition, I introduced to the system, an SWR meter that enable an automatic tune. During the course of the capacitor of the antenna tuner, the Arduino saves the capacitor position and records the value of the SWR.
Once known the position of the capacitor which results in lowest SWR, the tuning is performed.

See my video about: Automatic Antenna Tuner for QRP controlled by Android and Arduino:
https://www.youtube.com/watch?v=cZjbZRGTyVc

Best Regards.
Ricardo.
PU2CLR.

9795. Re: [loopantennas] Velocity cable factor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-28 22:05:28 UTC
From: Nestor Escala
Topic: 9792 Message: 9795

Hi Clement.

Your question is not clear.

Do you need a open-wire line with two lines H07V-K ? or other configurations?

The velocity factor is VP = 1/k, where k: dielectric constant, when the wave travel into the dielectric. For PVC k~ 3 to 6.

But also the VF = 1 / (c*(L*C)^0,5) where c is light velocity, L, inductance /meter and C: capacitance / meter. This is a VF for a transmission line. You need to know the configuration of the transmisission line for to know VF. In this case, the VF is strongly dependent of the capacitance. The capacitance is given by the dielectric: PVC-air-PVC in series for a paralell transmission line with H07V-K.

For rule of thumb, the VF for a wire open transmission line is ~ 0,90 / 0,989

Best regards

Nestor

----- Original Message -----
From: clement F59465
To: loopantennas@yahoogroups.com
Sent: Monday, March 25, 2013 6:40 PM
Subject: [loopantennas] Velocity cable factor

Hi to all,

I seek to know the velocity factor of this type of flexible electrical cable:

H07V-K 2.5mm Stranded

Thank you
Cordially

--

73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube

--

Caselle da 1GB, trasmetti allegati fino a 3GB e in piu' IMAP, POP3 e SMTP autenticato?
GRATIS solo con Email.it http://www.email.it/f

Sponsor:

Su MisterCupido.com puoi creare REGALI PERSONALIZZATI. Stampa le tue Foto su: Cuscini, Tazze, Puzzle, Peluche, Magliette, Poster... Consegne in tutta Italia in soli 2-3 giorni

Clicca qui: http://adv.email.it/cgi-bin/foclick.cgi?mid=12385&d=28-3

9796. Re: Automatic Antenna Tuner for QRP controlled by Android and Arduino

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-03-31 10:40:21 UTC
From: jm38401
Topic: 9794 Message: 9796

Excellent work!! Thanks for sharing, Ricardo.

73,
John
K4KQZ

--- In loopantennas@yahoogroups.com, "pu2clr" <pu2clr@...> wrote:
>
> Hello Everybody.
>
> I would like to show you my homebrew Magnetic Loop Antenna working with a homebrew Antenna Tuner controlled by Android and Arduino.
>

9797. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-01 12:22:23 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 9797

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

9798. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-01 12:22:23 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 9798

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

9799. Re: MFJ Hi-Q loop installed Horizontaly

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-02 10:44:39 UTC
From: rodger_g8hlh
Topic: 9652 Message: 9799

OK Thanks, Will go with a 2M fibreglass extension to carry the Loop.

Kind regards RODGER (G8HLH)

--- In loopantennas@yahoogroups.com, g.preston@... wrote:
>
> A metal pole might have induced currents causing losses. A wooden or
> plastic pole would solve that problem.
>
> 73 de k5gp
>
> At 05:12 AM 1/27/2013, you wrote:
> >I have just installed my MFJ Hi-Q loop 7-21Mhz Horizontally and am
> >having excellent results, but I ask if the support pole was extended
> >thro the center could it be used to support a (Say) 2m / 70 CM / 6M
> >vertical as well without detrimental effect to the HI-Q loop
> >operation? Has anyone done this. Comments apreciated Kind regards
> >Rodger (G8HLH) at <email address removed by moderator, please direct
> >responses to the list>
>

9800. New Litz Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-04 04:48:39 UTC
From: WilliamY
Topic: 9800 Message: 9800

For several months now I have been using a 3 foot by 5 foot two winding loop antenna wound with 28 AWG solid magnet wire with reasonably good results. There is a five turn tuned winding and a one turn output winding driving my Ten Tec RX320D receiver. These two windings are not separated by more than their insulating enamel. This antenna is situated east-west and does not rotate. I can receive WD2XSH/7 in Natchitoches, Louisiana frequently with a readable CW signal as well as a number of nondirectional beacons.

Now, however I have been designing an improved version to be wound with 100/44 litz wire. The two windings will be separated by about 7/16 inch. I have written a few lines of code in MS Small Basic to allow me to use an equation from F. E. Terman's 1943 Radio Engineering Handbook to related winding separation in inches to coupling coefficient k. I can then enter values of k in a circuit model in LTSPICE IV to optimize output to the receiver. The new antenna should have an 11 dB improvement in signal output and a calculated overall Q of 111. My present antenna described above has a calculated Q of 17.

Are these numbers likely to result in an audible improvement in antenna performance? Bill Young WD5HOH

9801. MFJ-Loop Tuner & 6M

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-04 12:04:29 UTC
From: rodger_g8hlh
Topic: 9801 Message: 9801

Hi guys,

The MFJ-936B (et al) is supplied as a 3.5 - 30Mhz loop tuner, Has anyone been able to get it to tune a loop for 6M?

Regards Rog G8HLH

9802. Re: New Litz Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-04 14:51:32 UTC
From: vbifyz
Topic: 9800 Message: 9802

Unless you are far from civilization, the performance of your receiving system is much more likely to be affected by the man-made interference levels than by your antenna efficiency. We are in a very different world compared to 1943.
In case there is one prevailing interference source, the antenna can help. But the parameter to look at is the null depth, and the antenna has to be rotated to minimize the noise .

73, Mike

--- In loopantennas@yahoogroups.com, "WilliamY" <lpwjy@...> wrote:
>
> The new antenna should have an 11 dB improvement in signal output and a calculated overall Q of 111. My present antenna described above has a calculated Q of 17.
>
> Are these numbers likely to result in an audible improvement in antenna performance? Bill Young WD5HOH
>

9803. RE: [loopantennas] Re: New Litz Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-04 19:53:01 UTC
From: William Young
Topic: 9800 Message: 9803

Mike, No I live in a noisy suburban environment, and nulls don't help much here. I have a small 360 degrees rotatable loop for AM broadcast. The nulls are broad or non existent. Any loop I use here is surrounded by wiring in the walls and conducting objects including myself. My primary interest now is the new 472 kHz - 479 kHz amateur band, and I find that the CW setting on my RX320D makes enough signals audible to keep listening interesting. As for my use of an equation from a 1943 handbook I have noticed in this group some interest in optimizing the spacing between a tuned winding and the winding driving the receiver. I have just found a way to do that without "cut and try" that's all. I have yet to try one of the new ferrite core rotateable small loops. And they tilt for optimum azimuth also.That may be a whole new ball game. Bill Young WD5HOH
To: loopantennas@yahoogroups.com
From: 3ym3ym@...
Date: Thu, 4 Apr 2013 14:51:32 +0000
Subject: [loopantennas] Re: New Litz Loop Antenna

Unless you are far from civilization, the performance of your receiving system is much more likely to be affected by the man-made interference levels than by your antenna efficiency. We are in a very different world compared to 1943.

In case there is one prevailing interference source, the antenna can help. But the parameter to look at is the null depth, and the antenna has to be rotated to minimize the noise .

73, Mike

--- In loopantennas@yahoogroups.com, "WilliamY" <lpwjy@...> wrote:

>

> The new antenna should have an 11 dB improvement in signal output and a calculated overall Q of 111. My present antenna described above has a calculated Q of 17.

>

> Are these numbers likely to result in an audible improvement in antenna performance? Bill Young WD5HOH

>

9804. J271 Availability

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-05 19:26:49 UTC
From: Chris Waldrup
Topic: 9804 Message: 9804

Hi,

I am wanting to build one of Dallas Lankford's active loop antennas and would like to know if anyone knows of a source where I could buy a few through hole J271 JFETs. All the usual suppliers have zero in stock and it is an obsoleted part. Thanks in advance.

Chris
KD4PBJ

9805. Re: [loopantennas] J271 Availability

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-05 20:26:36 UTC
From: Steve Ratzlaff
Topic: 9804 Message: 9805

The J176 works; I've used both types in my homebrew Lankford amp.
They're both the same die geometry. Allelectronics.com, for one seller,
currently lists the J176.
Steve
On 4/5/2013 12:26 PM, Chris Waldrup wrote:
>
> Hi,
>
> I am wanting to build one of Dallas Lankford's active loop antennas
> and would like to know if anyone knows of a source where I could buy a
> few through hole J271 JFETs. All the usual suppliers have zero in
> stock and it is an obsoleted part. Thanks in advance.
>
> Chris
> KD4PBJ
>

9807. Re: Newbie question: pick-off loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-06 14:46:46 UTC
From: tenorman1952
Topic: 9806 Message: 9807

--- In loopantennas@yahoogroups.com, "dfq98" <dfq98@...> wrote:
>
> Hi folks,
> I made tunable loop antennas about 34 yrs ago and again this month for DX-ing, the first time for coupling to a small radio with built-in ferrite loop, and this time for a receiver that has antenna terminals.
>
> The small 11" square loop I've made this time is made from two loops of 6-conductor telephone cable, with the internal wires daisy-chained to make the equivalent of 12 loops, and tuned with a 700 pF variable capacitor. It has very sharp nulls and sharp tuning over about 1510-1400 kHz or so.
> So: on to my question. I've coupled this to the radio using a single turn of wire nestled between the two telephone cables (total width about 0.3"), but I have been unable to find any design criteria for how to optimize this second loop. I.e. is there a formula to estimate the optimal number of turns, position relative to the tuned loop, and radio parameters? None of the loop calculators that I've seen include such details.
> Thanks in advance!
>

One turn is just fine. It can be the same size as the main loop, or smaller, inside of the main loop.

Paul - AE5JU

9808. Re: Newbie question: pick-off loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-06 14:48:03 UTC
From: tenorman1952
Topic: 9806 Message: 9808

--- In loopantennas@yahoogroups.com, "dfq98" <dfq98@...> wrote:
>
> Hi folks,
> I made tunable loop antennas about 34 yrs ago and again this month for DX-ing, the first time for coupling to a small radio with built-in ferrite loop, and this time for a receiver that has antenna terminals.
>
> The small 11" square loop I've made this time is made from two loops of 6-conductor telephone cable, with the internal wires daisy-chained to make the equivalent of 12 loops, and tuned with a 700 pF variable capacitor. It has very sharp nulls and sharp tuning over about 1510-1400 kHz or so.
> So: on to my question. I've coupled this to the radio using a single turn of wire nestled between the two telephone cables (total width about 0.3"), but I have been unable to find any design criteria for how to optimize this second loop. I.e. is there a formula to estimate the optimal number of turns, position relative to the tuned loop, and radio parameters? None of the loop calculators that I've seen include such details.
> Thanks in advance!
>

Also, I've connected the "sense loop" aka "pickup loop" to the radio with coax, 300 ohm twinlead, and simple twisted pair of 22 ga hookup wire. I can't tell the difference with any of these three.

Paul - AE5JU

9809. Re: Newbie question: pick-off loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-06 14:57:57 UTC
From: dldorrance
Topic: 9806 Message: 9809

<Also, I've connected the "sense loop" aka "pickup loop" to the radio with coax,300 ohm twinlead, and simple twisted pair of 22 ga hookup wire. I can't tell the difference with any of these three>

That's because your receiver is much less sensitive to mismatched impedance than a transmitter.
>

9810. Re: [loopantennas] Re: Newbie question: pick-off loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-06 16:41:15 UTC
From: Jerry Flanders
Topic: 9806 Message: 9810

FYI, Cat-5 cable also makes a good cheap transmission line. Either pair of the 4 pairs there is about 200 ohms balanced, two pairs paralleled is 100, all 4 pairs paralleled is about 50. Observe polarity at both ends.

I use it to carry component HDTV sigs around my house.

Good to above 100 MHz, IIRC.

Jerry W4UK

At 10:57 AM 4/6/2013, you wrote:
><Also, I've connected the "sense loop" aka "pickup loop" to the
>radio with coax,300 ohm twinlead, and simple twisted pair of 22 ga
>hookup wire. I can't tell the difference with any of these three>
>
>That's because your receiver is much less sensitive to mismatched
>impedance than a transmitter.
> >

9811. Re: Newbie question: pick-off loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-07 13:05:24 UTC
From: tenorman1952
Topic: 9806 Message: 9811

--- In loopantennas@yahoogroups.com, "dldorrance" <dldorrance@...> wrote:
>
> <Also, I've connected the "sense loop" aka "pickup loop" to the radio with coax,300 ohm twinlead, and simple twisted pair of 22 ga hookup wire. I can't tell the difference with any of these three>
>
> That's because your receiver is much less sensitive to mismatched impedance than a transmitter.
> >
>

What does a transmitter have to do with it? It is a receiving loop.

The impedance mismatch has no discernable effect. All three methods work well.

Paul - AE5JU

9812. Shielded Loop Antennas for the AM Band

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-08 02:14:47 UTC
From: Judi Black_Lake
Topic: 9812 Message: 9812
Attachments: 3 described; binary payloads are missing from this source WARC

Shielded Loop
Antennas for the AM Band

Mar 8, 2013 5:01 PM, By
Doug Irwin CPBE DRB AMD

Last month I wrote some
about making a notch filter for the AM band. However, before you have any
signals to notch out, you must first, of course, have some signal to begin
with. Let's talk a little about shielded loop antennas for the AM (or MW) band.

If you have an AM station
in your group then it's quite likely that you'll need a clean off-air signal at
the studio location. That's not always as easy as it sounds at first; there
could be any number reasons that off-air reception is hampered or otherwise
less-than-perfect. And even if you don't have an AM station in your group there
are plenty of reasons you might need to receive one cleanly off-air: the
station you want to receive could be an EAS source, a news or sports source, or
maybe even a competitor. You could be relatively far away from them, or you
could be in a noisy environment (electrical noise that is) or perhaps there is
a strong local AM causing problems with reception of the weaker signal. A
shielded-loop antenna may very well be all you need to pull in a good signal.

Likely you already know
that the loop antenna is quite directional; it has its maximum reception
parallel to the plane of the loop, and nulls that are orthogonal to the loop
(that is, rotated 90 degrees). See Figure 1. The advantage to this is that, by
changing the bearing of the loop, you can optimize the desired to undesired
ratio as seen on its output. In other words, you might maximize the station you
want, hoping for a reduction in strength from the station you don't want; or
you might null out the station you don't want, while finding the one you do
still comes in OK.

When a loop is shielded
it means that the turns of the loop itself are inside of a shield -- one that
is open at some point. See Figure 2. This shielding has the very beneficial
effect of rejection of electrostatic fields -- often the source of noise
getting in to an AM receiver. Since the shield is open, the incident magnetic
fields (i.e., the station you want to receive) will still induce voltages in
the loop, thus providing a signal for your receiver.

There are quite a few
sources of this type of antenna. For starters, you could roll your own at the
very least as an experiment to see if your reception problems are solved. Take
a look at the engineer's notebook entry from Radio magazine at the link

below.

Years ago my friend John
Scherer used to build and sell shielded loop antennas; I mention his because he used to load the loop a little differently. Take a look at Figure 3. John made square loops from copper tubing, with PVC as the center insulator. The windings themselves were made from a ribbon cable. The number of turns of course depended upon where in the AM band the antenna was supposed to resonate. (If you want to hack this design yourself, take a look at this online calculator to figure out how much inductance the loop will have
http://www.technick.net/public/code/cp_dpage.php?aiocp_dp=util_inductance_rectangle

Then find the capacitor
that will in turn resonate the loop here: http://1728.org/resfreq.htm

A single-turn was coupled
to the main loop magnetically, and the main loop was resonated. That single turn drove a coax output that was meant to drive 50 ohms.

If you want to buy a
commercially made product, Belar Electronics makes a shielded loop antenna.

http://belar.com/AM/lp1.htm

This type of antenna is
also popular with ham radio operators and other hobbyists. Take a look at this one from AOR USA :
http://aorusa.com/antennas/la400.html. This one is not meant
to be used outside though, so hopefully it could find a safe place inside your radio station.

9813. Ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-12 19:31:32 UTC
From: dannibou
Topic: 9813 Message: 9813

Hi to the group. I have an AM antenna ferrite that is broke. I've read some month ago on this group that it is possible to reglue without lack in performance. I've found in my junkbox a ferrite with the same diameter but longer than the original and it won't fit the available room of the radio. My question is: Should I reglue the original or replace with the longer one? How can I cut the second (longer) ferrite to the same length of the original? Thanks for any advice.
Danny

9814. Re: [loopantennas] Ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-13 01:21:52 UTC
From: John Popelish
Topic: 9813 Message: 9814

Given that the rod form is an open magnetic structure (there is already lots of air between the ends of the rod), there is almost no change in the effect of the rod, if it is broken and glued with minimal gap between the pieces. I suggest slow cure epoxy (stronger than the 5 minute cure stuff). But methacrylate (instant) glue works well, if you can get the pieces together right in a few seconds. Just don't use anything with mineral filler in it Anything opaque), because the particles in those add a larger gap between the pieces.

--
Regards,

John Popelish

On Fri, Apr 12, 2013 at 3:31 PM, dannibou <dannibou@...> wrote:

> Hi to the group. I have an AM antenna ferrite that is broke. I've read
> some month ago on this group that it is possible to reglue without lack in
> performance. I've found in my junkbox a ferrite with the same diameter but
> longer than the original and it won't fit the available room of the radio.
> My question is: Should I reglue the original or replace with the longer
> one? How can I cut the second (longer) ferrite to the same length of the
> original? Thanks for any advice.
> Danny
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the
> Links rather than uploading the file.
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> into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
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9815. stacking ferrite rods

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-13 09:51:26 UTC
From: Vojtech
Topic: 9815 Message: 9815

Hello.

I am experimenting with various receiving loop antennas for HAM bands up to 40m. I did try various single turn loops and they work well indeed, but they are a little too big to carry on a business trip.

I am now experimenting with ferrite rods. First experiment was done with a stacked RFI ferrite beads and it was a disaster. The Q at 80m was around 10. Then I stacked two unknown flat rods from my father's junk box side by side and the Q is now around 100 at 40m and the antenna made of four of the same rods making a square rod of 12mm x 17mm x 160mm produces marginal atmospheric noise over receiver noise when resonated and connected to a NE612 mixer input directly. I am living on the outskirt of Prague, the man made noise is relatively high.

I ordered 6 round ferrite NiZn rods 10mm dmr, 165mm long. The material has a permeability 200 compared to the Amidon 61 mix with permeability only 125. The Amidon 61 mix is usually recommended for the lower HAM bands. I am aware of the extended losses of my higher permeability material, but one cannot beat the price of the Czech made surplus material of the communist era, comparing $1.50 for the Czech rod to an unobtainable Amidon R61-050750 ($20-$25).

My question is: How to stack the rods? Some of the broadcast band rods are notched along the length of the rods. The ferrite material has some resistivity, therefore it sounds logical to insulate the rods from each other. Does it make a difference?

What ratio of diameter to length shall one maintain? What is the rule of thumb?

73, Vojtech OK1IAK

9816. Re: [loopantennas] stacking ferrite rods

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-13 15:17:43 UTC
From: John Popelish
Topic: 9815 Message: 9816

NiZn ferrite does not normally have a measurable resistance (when touched with a pair of ohm meter probes), so if you see a measurable resistance, I bet the rods are MgZn ferrite, and should be insulated from each other, if bundled.

--
Regards,

John Popelish

On Sat, Apr 13, 2013 at 5:51 AM, Vojtech <bubnikv@...> wrote:

> Hello.
>
> I am experimenting with various receiving loop antennas for HAM bands up
> to 40m. I did try various single turn loops and they work well indeed, but
> they are a little too big to carry on a business trip.
>
> I am now experimenting with ferrite rods. First experiment was done with a
> stacked RFI ferrite beads and it was a disaster. The Q at 80m was around
> 10. Then I stacked two unknown flat rods from my father's junk box side by
> side and the Q is now around 100 at 40m and the antenna made of four of the
> same rods making a square rod of 12mm x 17mm x 160mm produces marginal
> atmospheric noise over receiver noise when resonated and connected to a
> NE612 mixer input directly. I am living on the outskirt of Prague, the man
> made noise is relatively high.
>
> I ordered 6 round ferrite NiZn rods 10mm dmr, 165mm long. The material has
> a permeability 200 compared to the Amidon 61 mix with permeability only
> 125. The Amidon 61 mix is usually recommended for the lower HAM bands. I am
> aware of the extended losses of my higher permeability material, but one
> cannot beat the price of the Czech made surplus material of the communist
> era, comparing $1.50 for the Czech rod to an unobtainable Amidon R61-050750
> ($20-$25).
>
> My question is: How to stack the rods? Some of the broadcast band rods are
> notched along the length of the rods. The ferrite material has some
> resistivity, therefore it sounds logical to insulate the rods from each
> other. Does it make a difference?
>
> What ratio of diameter to length shall one maintain? What is the rule of
> thumb?
>
> 73, Vojtech OK1IAK
>
>

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> ------------------------------------
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>
> And please trim all this when replying!Yahoo! Groups Links
>
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>

9817. Re: stacking ferrite rods

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-14 11:50:57 UTC
From: Vojtech
Topic: 9815 Message: 9817

Hi John.

You are right. I checked these rods with an ohm meter and I am unable to measure any resistance.

The performance of the rod is marginal on HF. If I only could find a source of a single aluminium replacement rim for a children bike. That would make a perfect high performance receiving loop for a traveler.

73, Vojtech OK1IAK

--- In loopantennas@yahoogroups.com, John Popelish <jpopelish@...> wrote:
>
> NiZn ferrite does not normally have a measurable resistance (when touched
> with a pair of ohm meter probes), so if you see a measurable resistance, I
> bet the rods are MgZn ferrite, and should be insulated from each other, if
> bundled.
>
> --
> Regards,
>
> John Popelish
>
>
> On Sat, Apr 13, 2013 at 5:51 AM, Vojtech <bubnikv@...> wrote:
>
> > Hello.
> >
> > I am experimenting with various receiving loop antennas for HAM bands up
> > to 40m. I did try various single turn loops and they work well indeed, but
> > they are a little too big to carry on a business trip.
> >
> > I am now experimenting with ferrite rods. First experiment was done with a
> > stacked RFI ferrite beads and it was a disaster. The Q at 80m was around
> > 10. Then I stacked two unknown flat rods from my father's junk box side by
> > side and the Q is now around 100 at 40m and the antenna made of four of the
> > same rods making a square rod of 12mm x 17mm x 160mm produces marginal
> > atmospheric noise over receiver noise when resonated and connected to a
> > NE612 mixer input directly. I am living on the outskirt of Prague, the man
> > made noise is relatively high.
> >
> > I ordered 6 round ferrite NiZn rods 10mm dmr, 165mm long. The material has
> > a permeability 200 compared to the Amidon 61 mix with permeability only
> > 125. The Amidon 61 mix is usually recommended for the lower HAM bands. I am
> > aware of the extended losses of my higher permeability material, but one
> > cannot beat the price of the Czech made surplus material of the communist

> > era, comparing $1.50 for the Czech rod to an unobtainable Amidon R61-050750
> > ($20-$25).
> >
> > My question is: How to stack the rods? Some of the broadcast band rods are
> > notched along the length of the rods. The ferrite material has some
> > resistivity, therefore it sounds logical to insulate the rods from each
> > other. Does it make a difference?
> >
> > What ratio of diameter to length shall one maintain? What is the rule of
> > thumb?
> >
> > 73, Vojtech OK1IAK
> >
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> > ---
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> >
> > And please trim all this when replying!Yahoo! Groups Links
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9818. Re: [loopantennas] Re: stacking ferrite rods

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-14 12:32:15 UTC
From: brian nsl
Topic: 9815 Message: 9818

Vojtech,
Have a look at this website, worth a read on the subject.

Alan Yates' Laboratory - Bicycle Rim Antenna for 20 Metreswww.vk2zay.net/article/158
72, Brian, GØNSL
----- Original Message -----
From: Vojtech
To: loopantennas@yahoogroups.com
Sent: Sunday, April 14, 2013 12:50 PM
Subject: [loopantennas] Re: stacking ferrite rods

9819. Re: Digest Number 2234 (Portable loop)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-14 21:08:58 UTC
From: Hue Miller
Topic: 9819 Message: 9819

Loop Antenna News and Information ForumAs you're only interested in receiving, a large metal thing like a
bicycle rim isn't needed. The Sony loop (I think "LP-1" ??) uses
flexible steel wire that can be folded up small. However this
antenna is about $100 and even used ones fetch a good price.
I looked at some products here that use a similar flexible spring
wire. There are some "folding laundry baskets" for sale here
that use a similar wire. My thinking is to cut off all the synthetic
cloth material from this basket and remove one of the metal loops.
The amplifier could be built in a quite small plastics box with the
loop wire attached. I am thinking also use some kind of plastic
gripping clamp removed from something else; this clamp would
be moved onto the amplifier box, so the unit could be clamped
to a window frame or such.
I have also looked at something called "telephone C wire",
which is 2 flexible steel wires in a flexible plastics carrier,
used for the local "drop" from the pole to to the customer
house for wire telephone systems. This wire will self-support
and retain a circle form to a diameter of about 1/2 meter.
-Hue Miller

9820. 2.5-15KV BUTTERFLY CAPACITOR

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-14 23:15:04 UTC
From: pop
Topic: 9820 Message: 9820

2.5-15KV BUTTERFLY CAPACITOR KITS for sale

www.youtube.com/watch?v=dmZxgmalP9g

http://forums.qrz.com/showthread.php?351604-Butterfly-capacitor-kits-5-15kv

http://www.flickr.com/photos/93005502@N08/page3/ 2,1

3" OD ROTOR
4" OD ROTOR
5" OD ROTOR
6" OD ROTOR
10" OD ROTOR

VA6POP
yo5bzz(at)gmail.com
.

http://forums.qrz.com/showthread.php?378701-2-5-15kv-butterfly-capacitor-kits&p=\
2764980#post2764980

http://groups.yahoo.com/group/loopantennas/photos/album/1355109643/pic/list

http://groups.yahoo.com/group/loopantennas/photos/album/1356390600/pic/list

9821. Re: Digest Number 2234 (Portable loop)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-15 08:42:49 UTC
From: Vojtech
Topic: 9819 Message: 9821

Hello Hue.

I would be careful using such a spring wire for a loop antenna. My 40cm dmr tuned loop made of 6mm aluminium tube provides band noise around 10-12dB on 40m band over the internal noise of a NE612 active mixer, which has a noise figure below 6dB. Using a good FET preamp one may gain likely additional 3dB of S/N. The S/N of a tuned loop depends mainly on the loop area and loop resistance accounting for a skin effect. Using a thin iron spring wire would seriously degrade the antenna S/N.

Talking about foldable laudry baskets. There are foldable shopping baskets with aluminium frame on the market. These baskets are quite pricey, but the aluminium frame is quite thick. One could bridge the joints with a copper braid. Aluminium is relatively easy soldered with a SnZn solder. The melting temperature of the SnZn solder is around 350 degree Celsius.

73, Vojtech OK1IAK

9822. Shielded Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-17 02:18:32 UTC
From: Steve
Topic: 9779 Message: 9822

I'm building another shielded loop using a homebrew Burhan's preamp. This one will be either 9' or 10' in an octagonal shape. My previous shielded loops have always used RG-8 for the main element but this time I am considering RG-58 coax in an effort to reduce the wind loading a bit. I'm wondering if there would be any performance disadvantage by going to the smaller coax ?

Steve / 73

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

9823. Re: [loopantennas] 2.5-15KV BUTTERFLY CAPACITOR

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-16 14:10:01 UTC
From: p1jn3v11@...
Topic: 9820 Message: 9823

I went to all the links but I can't find the place where to buy them

Can you help

Thanks

Steve
KF7ZFC

-----Original Message-----
From: pop <pop_vasile@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Sun, Apr 14, 2013 9:30 pm
Subject: [loopantennas] 2.5-15KV BUTTERFLY CAPACITOR

2.5-15KV BUTTERFLY CAPACITOR KITS for sale

www.youtube.com/watch?v=dmZxgmalP9g

http://forums.qrz.com/showthread.php?351604-Butterfly-capacitor-kits-5-15kv

http://www.flickr.com/photos/93005502@N08/page3/ 2,1

3" OD ROTOR
4" OD ROTOR
5" OD ROTOR
6" OD ROTOR
10" OD ROTOR

VA6POP
yo5bzz(at)gmail.com
.

http://forums.qrz.com/showthread.php?378701-2-5-15kv-butterfly-capacitor-kits&p=\
2764980#post2764980

http://groups.yahoo.com/group/loopantennas/photos/album/1355109643/pic/list

http://groups.yahoo.com/group/loopantennas/photos/album/1356390600/pic/list

9824. Re: [loopantennas] Shielded Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-17 13:11:31 UTC
From: Chris Trask
Topic: 2309 Message: 9824

>
>I'm building another shielded loop using a homebrew Burhan's preamp. This
>one will be either 9' or 10' in an octagonal shape. My previous shielded
>loops have always used RG-8 for the main element but this time I am
>considering RG-58 coax in an effort to reduce the wind loading a bit. I'm
>wondering if there would be any performance disadvantage by going to the
>smaller coax ?
>

Should work pretty much the same, though the bulk resistance will be a little higher due to the smaller cross section of the conductors.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

9825. Re: [loopantennas] Shielded Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-17 17:27:18 UTC
From: Steve
Topic: 2309 Message: 9825

> Should work pretty much the same, though the bulk resistance will be a
> little higher due to the smaller cross section of the conductors.

Thanks Chris...that's kind of what I felt as well, the only real difference being the increased R but at this small size it would likely not be an issue....hopefully.

Steve / 73

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

9826. Great staff (FT817 and Magnetic Loop Antenna)

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-20 10:57:03 UTC
From: pu2clr
Topic: 9826 Message: 9826

Hello guys,
I would like to present another video with two QSO.
In both I was working with a QRP station (Yaesu FT817 and Magnetic Loop Antenna).
Contacts were made on December 31, 2012 (Clile and Uruguay).

Please see my Youtube channel: http://www.youtube.com/watch?v=D1Qusiy1cCQ&feature=youtu.be

Have a nice weekend.

73 PU2CLR.
Ricardo.

9827. A compendium !!!

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-21 10:20:38 UTC
From: brian nsl
Topic: 9827 Message: 9827

Hi All,
This morning whilst searching via Google for ' Rotatable Loop Antennas / HF '
I unwittingly clicked the ' images ' button, an amazing variety of antennas appeared,
well worth a look.
72, Brian, GØNSL.

9828. Reuter loopantenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-21 12:36:06 UTC
From: dx11
Topic: 9828 Message: 9828

Has anyone of you any experience with this small active loopantenna?

http://www.reuter-elektronik.de/Produkte/RLA/rla.html

Cor Beijersbergen

9829. Great site for basic loop information.

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-22 02:28:26 UTC
From: Judi Black_Lake
Topic: 9829 Message: 9829

Great site for basic loop information..
Scroll to the bottom to see more web sites.
Tell me what you think.

http://www.angelfire.com/mb/amandx/loop.html

9830. Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 01:50:02 UTC
From: burnsguitar
Topic: 9830 Message: 9830

Hello All,

Has anyone had any experience with reducing a transmitting loop size by half by going to two turns? That seems to be a size that falls in between the usual definitions of a "small" narrow bandwidth loop, and the full wave, or "skywire" loop. I've not been able to find any info on the size, but it could make a rotatable loop for 40 meters at least within reason, at 15 or so feet square.

Cheers,

Brian Burns

9831. Re: [loopantennas] Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 04:10:05 UTC
From: Bill
Topic: 9830 Message: 9831

Brian,
SGC TUNERS has something like that in one of their online PDF documents.
I think its in the "STEALTH BOOK".
I have it somewhere, if you cant find it.
It is on a PVC frame, four turns, I think.
With a SGC tuner they claim can tune up most hf bands.
I guess you could cut it exactly for 40. And no tuner.
I plan on building one for my attic, wishful thinking is 75 meters...:)
Vertical mounted, delta shape about 10x10x10. Multiple turns. Possibly on a rotor. R&D stage.
But then I can dream right;)
Bill
N2VIL

burnsguitar <brian@lessonsinlutherie.com> wrote:

>Hello All,
>
>Has anyone had any experience with reducing a transmitting loop size by half by going to two turns? That seems to be a size that falls in between the usual definitions of a "small" narrow bandwidth loop, and the full wave, or "skywire" loop. I've not been able to find any info on the size, but it could make a rotatable loop for 40 meters at least within reason, at 15 or so feet square.
>
>Cheers,
>
>Brian Burns
>

9832. Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 13:57:07 UTC
From: ik1wvq
Topic: 9830 Message: 9832

Hi,

take a look at http://www.nonstopsystems.com/radio/frank_radio_antenna_SM0VPO.htm

I tried the 40 meters versions:

My antenna and capacitor:
http://www.stmb.it/grabber/foto/loop_40_1.jpg
http://www.stmb.it/grabber/foto/loop_40_2.jpg
http://www.stmb.it/grabber/foto/loop_40_3.jpg

and here the results of 24 hours of WSPR with PRC320 military radio (15W measured)and this antenna placed inside in attic .. show only stations what RECEIVED my signals !

http://www.stmb.it/grabber/foto/40_loop_WSPR.jpg

enjoy ..

Mauro IK1WVQ
(enthusiastic of small SERIOUS antenna systems....)

--- In loopantennas@yahoogroups.com, "burnsguitar" <brian@...> wrote:
>
> Hello All,
>
> Has anyone had any experience with reducing a transmitting loop size by half by going to two turns? That seems to be a size that falls in between the usual definitions of a "small" narrow bandwidth loop, and the full wave, or "skywire" loop. I've not been able to find any info on the size, but it could make a rotatable loop for 40 meters at least within reason, at 15 or so feet square.
>
> Cheers,
>
> Brian Burns
>

9833. RE: [loopantennas] Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 15:36:19 UTC
From: Brian Burns
Topic: 9830 Message: 9833
Attachments: 2 described; binary payloads are missing from this source WARC

Hello Mauro,

Great references! Thanks very much! Do you notice much directional effect when you rotate the antennas?

73

Brian

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of ik1wvq
Sent: Tuesday, April 23, 2013 6:57 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: Two turn transmitting loop

Hi,

take a look at
http://www.nonstopsystems.com/radio/frank_radio_antenna_SM0VPO.htm

I tried the 40 meters versions:

My antenna and capacitor:
http://www.stmb.it/grabber/foto/loop_40_1.jpg
http://www.stmb.it/grabber/foto/loop_40_2.jpg
http://www.stmb.it/grabber/foto/loop_40_3.jpg

and here the results of 24 hours of WSPR with PRC320 military radio (15W measured)and this antenna placed inside in attic .. show only stations what RECEIVED my signals !

http://www.stmb.it/grabber/foto/40_loop_WSPR.jpg

enjoy ..

Mauro IK1WVQ
(enthusiastic of small SERIOUS antenna systems....)

--- In loopantennas@yahoogroups.com <mailto:loopantennas%40yahoogroups.com>
, "burnsguitar" <brian@...> wrote:
>
> Hello All,
>
> Has anyone had any experience with reducing a transmitting loop size by half by going to two turns? That seems to be a size that falls in between the usual definitions of a "small" narrow bandwidth loop, and the full wave, or "skywire" loop. I've not been able to find any info on the size, but it

could make a rotatable loop for 40 meters at least within reason, at 15 or so feet square.
>
> Cheers,
>
> Brian Burns
>

9834. RE: [loopantennas] Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 16:44:19 UTC
From: Brian Burns
Topic: 9830 Message: 9834

Hello again Mauro,

I had a look at the references that you sent, and it looks like these loops are definitely in the □small loop□ category.

I do like your home-made high voltage capacitor, and those are an impressive number of contacts for a compact antenna, and low power!

The antenna that I have in mind is in a kind of □no man□s land□ between the full wave, square loop with ¼ wavelength sides, and the narrow-band small loop.

I am fortunate to be able to put an antenna outside of my radio shack, but a square 40 meter full wave loop with 10 meter sides would be impractical. I□m just wondering if there would be much sacrifice in performance by going to a two turn loop with 1/8th wavelength (5 meter) sides, that resonates without a tuning capacitor, and has somewhat better bandwidth.

Thanks again for all the references! I love to see hams making their own gear out of materials from the hardware store!

Cheers,

Brian

See my website: www.lessonsinlutherie.com

9835. RE: [loopantennas] Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 17:25:23 UTC
From: Rick Karlquist
Topic: 9830 Message: 9835

Brian Burns wrote:

> just wondering if there would be much sacrifice in performance by going to
> a
> two turn loop with 1/8th wavelength (5 meter) sides, that resonates
> without
> a tuning capacitor, and has somewhat better bandwidth.

Using more than 1 turn does nothing to increase the radiation efficiency of the loop, and may decrease it due to additional copper losses.

For a given size loop, the product of bandwidth and efficiency is bounded. Often, changes in loop design that increase that bandwidth decrease the efficiency. Using multiple turns does nothing to affect this inevitable tradeoff. For additional information, Google on "Wheeler Chu small antennas".

Rick N6RK

9836. RE: [loopantennas] Great site for basic loop information.

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 18:05:31 UTC
From: William Young
Topic: 9829 Message: 9836

Thanks for the link to a good loop antenna article. I have been using the rectangular and square loop calculators at http://emclab.mst.edu/inductance/index.html for years. Very helpful. I wish I had room to make full use of the rotation and tilt features of the 3 or 4 foot box loop. Sharp, deep nulls would be useful. I have just completed a 42 inch by 58 inch rectangular loop with a five turn litz wire tuned winding and a one turn AWG #20 solid wire winding driving my ten Tec RX320D receiver. I have not found it worthwhile to leave space between turns, but the space between the windings is important. A relatively small distributed capacitance is not a problem for me, but I do like to maximize winding Q so I use "slot" windings, that is a winding with the wire pushed into a slot at each of the 4 cross arm ends. Keep in mind also that with litz wire you have to avoid sharp bends - I keep the bend radius for 100/44 litz at or above 1/4 inch. With a five turn slot winding and a one turn turn driver winding I can use LTSPICE IV to model the antenna performance. The model requires values for the coupling coefficient k which can be calculated using equations from F. E. Terman's Radio Engineers' Handbook, 1943. And this is much easier if each winding lies in one plane or nearly so. I have not been able to find anything more recent to relate k to winding separation. I find there is a functional relationship between k and antenna Q, so I maximize Q(hopefully improving the signal+noise/noise ratio thereby).My new 42 inch X 58 inch loop is located between a wooden bookcase and a wall(there is, I think house wiring inside that wall). My long range goal is to use this loop and my Ten Tec Rx320D to begin exploring WSPR-15 in the new 472 khz - 479 kHz amateur band. I live and operate in a noisy environment, but a good, high Q loop antenna will help. Thanks again for the article. Bill Young WD5HOH
To: loopantennas@yahoogroups.com
From: judi_blv@...
Date: Sun, 21 Apr 2013 19:28:26 -0700
Subject: [loopantennas] Great site for basic loop information.

Great site for basic loop information..
Scroll to the bottom to see more web sites.
Tell me what you think.

http://www.angelfire.com/mb/amandx/loop.html

9837. RE: [loopantennas] Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 18:39:55 UTC
From: Brian Burns
Topic: 9830 Message: 9837

Hello Rick,

Thanks for the reply, and the link!

~ Using more than 1 turn does nothing to increase the radiation efficiency of the loop, and may decrease it due to additional copper losses.

I'm expecting a decrease in radiation efficiency by going to a smaller size. I'm trying to avoid the very narrow bandwidth of the "small" loop, and the resultant need for a motor driven capacitor.

I can come up with a method of erecting a 5 meter (or so) square loop, and rotating it. If that size can be made to resonate on 40 meters by using two turns, without the need for additional capacitance, and can provide modest bandwidth and a bit of directional gain, then I'm happy.

The next fantasy is to turn that concept into a practical size of 40 meter cubical quad.

Cheers,

Brian__,,___

9838. Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-23 11:58:07 UTC
From: la2pj
Topic: 9830 Message: 9838

SGC has a description here: http://sgcworld.com/Publications/Manuals/stealthman.pdf

Good Luck!

Egil - LA2PJ

9839. Re: [loopantennas] Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-25 17:54:37 UTC
From: Andy
Topic: 9830 Message: 9839

I don't know if this helps, but there is another Yahoogroup called "Skywires" (http://groups.yahoo.com/group/SkyWires/) which is more along the lines of full-size loops as opposed to small loops. I think what you're doing is closer to a full size loop ... just cutting the area in half but with about the same amount of wire. Thus, the observations about trying to increase the efficiency don't really apply. Small loops assume that the current is uniform around the circumference of the loop, which would not be true of your antenna.

I recall reading a question (in one of my many email lists over the last several years), by someone also considering a 2-turn loop. I don't recall now whether he was trying to make the loop area smaller (like you), or doubling the wire by wrapping it twice around the same footprint. In any event, my impression was that there was not a lot of work done in that area already and you, and he, might be on your own.

I have seen elsewhere that the "full size" loop supposedly can be used as low as where the loop is only a half wavelength long. Most references to full size loops say that the lowest frequency is 1 wavelength circumference; but apparently it can work at half that. (And I don't mean like the old QST Skywire article where they use an 80m loop on 160 by turning it into a top-loaded vertical!)

Andy

9840. Re: [loopantennas] Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-25 20:12:28 UTC
From: kevin asato
Topic: 9830 Message: 9840

Here's something different in transmitting loop antennas that I found in an old ARRL Antenna Book with original reference cited in Electronics, January, 1963 - the DDRR (directional discontinuity ring radiator). It's basically a 1/4 wave radiator in a loop in close proximity to a ground plane/screen. It's main propagation mode is magnetic (loop is mounted horizontally, radiation is in the vertical plane ala NVIS). Feed to antenna is gamma type and loop is at ground potential. Diameter of tubing that comprises the loop varies according to frequency/band to minimize losses. A search using DDRR will turn up numerous references.

73,
kevin
kc6pob

From: Andy <ai.egrps@...>
To: loopantennas@yahoogroups.com
Sent: Thursday, April 25, 2013 10:54 AM
Subject: Re: [loopantennas] Two turn transmitting loop

I don't know if this helps, but there is another Yahoogroup called "Skywires" (http://groups.yahoo.com/group/SkyWires/) which is more along the lines of full-size loops as opposed to small loops. I think what you're doing is closer to a full size loop ... just cutting the area in half but with about the same amount of wire. Thus, the observations about trying to increase the efficiency don't really apply. Small loops assume that the current is uniform around the circumference of the loop, which would not be true of your antenna.

I recall reading a question (in one of my many email lists over the last several years), by someone also considering a 2-turn loop. I don't recall now whether he was trying to make the loop area smaller (like you), or doubling the wire by wrapping it twice around the same footprint. In any event, my impression was that there was not a lot of work done in that area already and you, and he, might be on your own.

I have seen elsewhere that the "full size" loop supposedly can be used as low as where the loop is only a half wavelength long. Most references to full size loops say that the lowest frequency is 1 wavelength circumference; but apparently it can work at half that. (And I don't mean like the old QST Skywire article where they use an 80m loop on 160 by turning it into a top-loaded vertical!)

Andy

9841. Re: [loopantennas] Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-25 20:19:40 UTC
From: Rick Karlquist
Topic: 9830 Message: 9841

kevin asato wrote:
> Here's something different in transmitting loop antennas that I found in
> an old ARRL Antenna Book with original reference cited in Electronics,
> January, 1963 - the DDRR (directional discontinuity ring radiator). It's

This thing has been pretty thoroughly debunked. I wouldn't bother with it.

Rick N6RK

9842. RE: [loopantennas] Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-25 21:52:45 UTC
From: Brian Burns
Topic: 9830 Message: 9842
Attachments: 1 described; binary payloads are missing from this source WARC

Hello Andy,

Thanks for the suggestions. I subscribed to "loop skywires" for quite a while, and may even have asked my two turn question there some time ago. You're right that there doesn't seem to have been much work on the idea, though Ike's suggestion looks promising. I really should shell out the cash to subscribe to AtennaX-I'll look into that.

Cheers,

Brian Burns

.

Image removed by sender.

9843. Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-26 00:54:37 UTC
From: qrpbear
Topic: 9830 Message: 9843

Rick,

What's to debunk about the DDRR? They work quite well when properly installed over a ground plane that extends to 2X the DDRR diameter. I installed a lot of them back in the '80s for use on VHF Lo-Band (30-50MHz) business radio systems. Nice fat, low angle pattern with a low profile and stable SWR when compared to a loaded whip. On VHF Hi-Band I used to install them as stealth antennas on the underside of unmarked police vehicles.

Don't knock it if you ain't tried it.

73,

'Bear' NH7SR

--- In loopantennas@yahoogroups.com, "Rick Karlquist" <richard@...> wrote:
>
> kevin asato wrote:
> > Here's something different in transmitting loop antennas that I found in
> > an old ARRL Antenna Book with original reference cited in Electronics,
> > January, 1963 - the DDRR (directional discontinuity ring radiator). It's
>
> This thing has been pretty thoroughly debunked. I wouldn't bother with it.
>
> Rick N6RK
>

9844. Re: [loopantennas] Re: Two turn transmitting loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-26 01:41:45 UTC
From: Richard (Rick) Karlquist
Topic: 9830 Message: 9844

On 4/25/2013 5:54 PM, qrpbear wrote:
> Rick,
>
> What's to debunk about the DDRR? They work quite well when properly

Because the originator's theory of operation ("directional discontinuity") is bunk.
It's just an inverted L with the horizontal wire bent into an arc.
Nothing new about bending the top of an inverted L, even in 1963.
With a very short vertical section (that's the only part that radiates). It doesn't make sense to limit yourself to such a short vertical unless you are under some sort of height limit. As far as working well is concerned, if high efficiency is somehow achieved in a DDRR, it is sure to have very limited bandwidth due to the small size. No way to get around that.

Rick N6RK

9845. correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-28 07:00:37 UTC
From: ik1wvq
Topic: 9845 Message: 9845

Hi to all,
there is a particular reason to place the coupling loop in the opposite side of the capacitor?
This is beacuse I am building a mono frequency mag loop for 28 MHz WSPR, and the capacitor (9pF FIXED) is a piece of RG8 coax cable without external braid slipped INSIDE the copper tube of the loop, and then is pratically invisible.
I would like (for mechanical reasons) to mount the loop with the capacitor at BOTTOM side, and put the coupling loop close to the "capacitor".

any contraindications?

thanks in advance for your attention..
best regards de Mauro IK1WVQ

9846. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-28 07:18:13 UTC
From: riccardodematteis
Topic: 9845 Message: 9846

Mauro, I put the coupling loop in the center and it worked well.
One call on 6 meters during Es opening with 2,5 W and OZ-land answered my CQ.
Ciao.
Riccardo - IZ5VVA

http://www.hamradioweb.org/forums/picture.php?albumid=13&pictureid=210
http://www.hamradioweb.org/forums/picture.php?albumid=13&pictureid=215

--- In loopantennas@yahoogroups.com, "ik1wvq" <ik1wvq@...> wrote:
>
> Hi to all,
> there is a particular reason to place the coupling loop in the opposite side of the capacitor?
> This is beacuse I am building a mono frequency mag loop for 28 MHz WSPR, and the capacitor (9pF FIXED) is a piece of RG8 coax cable without external braid slipped INSIDE the copper tube of the loop, and then is pratically invisible.
> I would like (for mechanical reasons) to mount the loop with the capacitor at BOTTOM side, and put the coupling loop close to the "capacitor".
>
> any contraindications?
>
> thanks in advance for your attention..
> best regards de Mauro IK1WVQ
>

9847. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-28 13:24:49 UTC
From: qrp.gaijin
Topic: 9845 Message: 9847

--- In loopantennas@yahoogroups.com, "ik1wvq" <ik1wvq@...> wrote:
>
> Hi to all,
> there is a particular reason to place the coupling loop in the opposite side of the capacitor?
> I would like (for mechanical reasons) to mount the loop with the capacitor at BOTTOM side, and put the coupling loop close to the "capacitor".

Placing the coupling loop near the capacitor has the danger that you may unbalance the loop and cause common mode currents to flow on the coaxial cable shield, making the feedline part of the antenna. This can lead to increased noise on receive, and RF in the shack on transmit.

The loop voltage is highest near the capacitor. For example, in the following image I calculated the electric field around the capacitor for a 2 meter by 2 meter loop antenna resonant at 7 MHz:

http://postimg.org/image/n091ogqbl/

The capacitor is at the top of the loop. Notice that the electric field intensity around the capacitor is hundreds of times greater than that around the bottom of the loop. Therefore, if you attempt to place a coupling loop and the feedline near the capacitor, inside of this huge electric field, it becomes relatively easy to unbalance the loop which will cause common mode currents.

It is for this same reason that optimized small loops have the capacitor at the top: to keep everything (feedline, supporting structure, and ground) away from the massive electric field around the capacitor, in order to best preserve the loop balance and ensure that each opposite half of the loop is excited equally.

9848. AM Antenna for Seagen WR-2

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-29 03:10:32 UTC
From: tigers424257
Topic: 9848 Message: 9848

I bought this radio about 2 months ago and enjoy listening to AM stations at night. I built the 1 foot square loop using 4 wire telephone cable but does make much difference in the reception. Any ideas on an antenna for indoor use in alimited area.

9849. Re: [loopantennas] AM Antenna for Seagen WR-2

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-29 03:38:37 UTC
From: John Popelish
Topic: 9848 Message: 9849

On 04/28/2013 11:10 PM, tigers424257 wrote:
> I bought this radio about 2 months ago and enjoy
> listening to AM stations at night. I built the 1 foot
> square loop using 4 wire telephone cable but does make
> much difference in the reception. Any ideas on an antenna
> for indoor use in alimited area.

Is this a Sangean WR-2, with a coax antenna connector?

If so, there is probably a large impedance mismatch between
it and your (I assume) 4 turn, 1 foot loop.

Have you tried to tune the loop with a variable capacitor
(or some different fixed capacitor values)?

I think I would try connecting a tuning capacitor across the
4 turns, and connect the shell of the coax to the "ground"
(case) terminal of that capacitor, and one turn from that
node, to the pin of the coax connector.

--
Regards,

John Popelish

9850. Re: AM Antenna for Seagen WR-2

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-29 17:28:39 UTC
From: jpopelish
Topic: 9848 Message: 9850

--- In loopantennas@yahoogroups.com, John Popelish <jpopelish@...> wrote:

> Is this a Sangean WR-2, with a coax antenna connector?
>
> If so, there is probably a large impedance mismatch between
> it and your (I assume) 4 turn, 1 foot loop.
>
> Have you tried to tune the loop with a variable capacitor
> (or some different fixed capacitor values)?
>
> I think I would try connecting a tuning capacitor across the
> 4 turns, and connect the shell of the coax to the "ground"
> (case) terminal of that capacitor, and one turn from that
> node, to the pin of the coax connector.

Sorry, I looked at a photo that had only a coax (type F) antenna connector, but that is only for FM antennas. The one with optional AM antenna input has screw terminals.

But my idea for connecting across one turn of a multi-turn, tuned loop holds, but you connect that turn to the two screw terminals.

--
Regards,

John Popelish
>

9851. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-04-29 14:18:18 UTC
From: JK De Marco
Topic: 9845 Message: 9851

> The loop voltage is highest near the capacitor. For example, in the following image I calculated the electric field around the capacitor for a 2 meter by 2 meter loop antenna resonant at 7 MHz:
>
> http://postimg.org/image/n091ogqbl/

Very nice and informative image! What software did you use to produce it? Thanks.

JK, PY2WM

9852. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-01 03:39:59 UTC
From: qrp.gaijin
Topic: 9845 Message: 9852

--- In loopantennas@yahoogroups.com, "JK De Marco" <py2wm@...> wrote:
> > The loop voltage is highest near the capacitor. For example, in the following image I calculated the electric field around the capacitor for a 2 meter by 2 meter loop antenna resonant at 7 MHz:
> >
> > http://postimg.org/image/n091ogqbl/
>
> Very nice and informative image! What software did you use to produce it? Thanks.

4nec2 (available free of charge). It's available here: http://www.qsl.net/4nec2/

For the near field, it can calculate and display in 3D the near E-field and near H-field. Note that in the above image, the horizontal purple line (very high voltage), extending far outside of the loop boundaries along the axis of the top side of the loop, may be some numeric calculation error, maybe due to the geometry or position of the loop. It doesn't make sense that the E-field would extend so far beyond the loop boundaries. (Maybe I should ask on the 4nec2 forum about this anomaly.) Apart from that, the results seem reasonable.

Here is the input file, if you want to experiment with the model. Save the following text to "something.nec" and load it into 4nec2. Note that the field separator, between items on a single line, is the tab character. The loop is resonant at 7.003 MHz, but has not been matched to 50 ohms.

```
CM
CE
SY C=6.6e-11
GW 1 20 -1 0 0.5 -1 0 2.5 .0127
GW 2 20 -1 0 2.5 1 0 2.5 .0127
GW 3 20 1 0 2.5 1 0 0.5 .0127
GW 4 20 1 0 0.5 -1 0 0.5 .0127
GE 1
LD 0 2 10 10 0.2 0 C
LD 5 1 1 20 58000000
LD 5 2 1 20 58000000
LD 5 3 1 20 58000000
LD 5 4 1 20 58000000
GN 2 0 0 0 5 0.001
EK
EX 6 4 10 0 1 0 0

FR 0 0 0 0 7.003 0
EN
```

9853. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-01 13:23:10 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 9853

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

9854. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-01 13:23:10 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 9854

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

9855. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-02 16:51:26 UTC
From: ik1wvq
Topic: 9845 Message: 9855

many thanks to all for the valuable informations.

73 de Mauro IK1WVQ

--- In loopantennas@yahoogroups.com, "ik1wvq" <ik1wvq@...> wrote:
>
> Hi to all,
> there is a particular reason to place the coupling loop in the opposite side of the capacitor?
> This is beacuse I am building a mono frequency mag loop for 28 MHz WSPR, and the capacitor (9pF FIXED) is a piece of RG8 coax cable without external braid slipped INSIDE the copper tube of the loop, and then is pratically invisible.
> I would like (for mechanical reasons) to mount the loop with the capacitor at BOTTOM side, and put the coupling loop close to the "capacitor".
>
> any contraindications?
>
> thanks in advance for your attention..
> best regards de Mauro IK1WVQ
>

9856. Re: [loopantennas] correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-02 19:23:31 UTC
From: toddroberts2001@...
Topic: 9845 Message: 9856

As I understand it, the end of a transmitting loop with the tuning capacitor
is the high-impedance end of the loop. The opposite end is the low-impedance
or "cold" end of the loop.

The coupling loop is normally low impedance around 50 ohms so for best match
it should be located at the low impedance end of the loop and exactly opposite
the tuning capacitor for best loop balance.

It is too bad the best location for the coupling loop is opposite the
tuning capacitor as it would be more convenient to have the two close
together especially on a larger loop and for mechanical reasons.

Most builders place the coupling loop at the bottom end of the loop
near the ground, so the tuning capacitor should be placed at the highest
end of the loop, the hardest place to reach mechanically on a large
loop.

There is lots of room for experimenting with best coupling to a
transmitting loop so someone may come up with a better method
to couple near the tuning capacitor end and solve several problems at once.

73 Todd WD4NGG

In a message dated 4/28/2013 3:00:46 A.M. Eastern Daylight Time,
ik1wvq@... writes:

Hi to all,
there is a particular reason to place the coupling loop in the opposite si
de of the capacitor?
This is beacuse I am building a mono frequency mag loop for 28 MHz WSPR,
and the capacitor (9pF FIXED) is a piece of RG8 coax cable without external
braid slipped INSIDE the copper tube of the loop, and then is pratically
invisible.
I would like (for mechanical reasons) to mount the loop with the capacitor
at BOTTOM side, and put the coupling loop close to the "capacitor".

any contraindications?

thanks in advance for your attention..
best regards de Mauro IK1WVQ

9857. WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 04:47:30 UTC
From: heavenzgoat
Topic: 9857 Message: 9857

I found a discarded holder for TV dinner trays and thanks to this group I modified it to hold a box loop antenna, it's great because it has a nice handle on top to pick it up and turn it. Speaking of TV dinner, a non-functioning TV was the source for hundreds of feet of magnet wire and a burned up portable transistor radio provided the tuning cap so I'm into this for $0. Another roll of old twisted pair telephone cable and I could put the antenna across the house away from the computer equipment where my Sony home stereo receiver also sits. It doesn't have an internal ferrite, only two speaker-wire type spring terminals.

Here's my question, do you know the math on this? I'm listening to KFI Los Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV, which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB what I'm hearing and how do the radio harmonics work out where I can hear it? The time station fades in and out but it's very clear when it's there under Tim Conway's voice.

Thanks,
Vince

9858. Re: [loopantennas] WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 06:32:27 UTC
From: Don
Topic: 9857 Message: 9858

There is no voice on WWVB - it is totally in code. If you are hearing SW on your AMBC radio you've got a problem! 'course some old vintage radios were designed to work like this but not mixing signals from two bands on one. Did I say that right?

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FUNcube Dongle Pro+
FRG-100B SR-AF & LPF DSP599zx
MFJ-784B HD-1418 AF-1 MSB-1
PA0RDT Mini-Whip x2 @ 25ft
RYO Active Antenna @ 25ft
LFL1010 ALA100L x2

On 02-May-13 21:47, heavenzgoat wrote:
> I found a discarded holder for TV dinner trays and thanks to this group I modified it to hold a box loop antenna, it's great because it has a nice handle on top to pick it up and turn it. Speaking of TV dinner, a non-functioning TV was the source for hundreds of feet of magnet wire and a burned up portable transistor radio provided the tuning cap so I'm into this for $0. Another roll of old twisted pair telephone cable and I could put the antenna across the house away from the computer equipment where my Sony home stereo receiver also sits. It doesn't have an internal ferrite, only two speaker-wire type spring terminals.
>
> Here's my question, do you know the math on this? I'm listening to KFI Los Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV, which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB what I'm hearing and how do the radio harmonics work out where I can hear it? The time station fades in and out but it's very clear when it's there under Tim Conway's voice.
>
> Thanks,
> Vince
>
>
>
>
> ---
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files

>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>
>

9859. Re: [loopantennas] WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 06:47:50 UTC
From: Jay Heyl
Topic: 9857 Message: 9859

On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@...>wrote:

> I found a discarded holder for TV dinner trays and thanks to this group I
> modified it to hold a box loop antenna, it's great because it has a nice
> handle on top to pick it up and turn it. Speaking of TV dinner, a
> non-functioning TV was the source for hundreds of feet of magnet wire and a
> burned up portable transistor radio provided the tuning cap so I'm into
> this for $0.

Excellent!

> Here's my question, do you know the math on this? I'm listening to KFI Los
> Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV,
> which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB
> what I'm hearing and how do the radio harmonics work out where I can hear
> it? The time station fades in and out but it's very clear when it's there
> under Tim Conway's voice.

Are you SURE it's WWV? Do you hear, "At the tone, the time will be...", or are you just hearing ticks on the second? You didn't mention your location so I have no idea if this makes any sense, but could it be Radio Reloj out of Cuba? They do non-stop news in Spanish with ticks every second and "RR" in Morse code at the top of every minute. Might that be what you're hearing. Since you're getting KFI the Spanish might be very faint but the ticks and Morse code might pop through. Unless you live near the WWV transmitter and it's bleeding all over everything, I'm thinking Radio Reloj is more likely.

-- Jay

9860. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 07:16:24 UTC
From: qrpbear
Topic: 9845 Message: 9860

There is another way to couple into a loop antenna which is done at the tuning capacitor. It's known as the "army loop method tuner" since it was originally designed for use by the US Army. You can see it here...

http://homepage.ntlworld.com/g4kki.william/army_loop_tuner.htm

Might be worth a try.

73,

'Bear' NH7SR

--- In loopantennas@yahoogroups.com, toddroberts2001@... wrote:
>
> As I understand it, the end of a transmitting loop with the tuning
> capacitor
> is the high-impedance end of the loop. The opposite end is the
> low-impedance
> or "cold" end of the loop.
>
> The coupling loop is normally low impedance around 50 ohms so for best
> match
> it should be located at the low impedance end of the loop and exactly
> opposite
> the tuning capacitor for best loop balance.
>
> It is too bad the best location for the coupling loop is opposite the
> tuning capacitor as it would be more convenient to have the two close
> together especially on a larger loop and for mechanical reasons.
>
> Most builders place the coupling loop at the bottom end of the loop
> near the ground, so the tuning capacitor should be placed at the highest
> end of the loop, the hardest place to reach mechanically on a large
> loop.
>
> There is lots of room for experimenting with best coupling to a
> transmitting loop so someone may come up with a better method
> to couple near the tuning capacitor end and solve several problems at once.
>
> 73 Todd WD4NGG
>
>
> In a message dated 4/28/2013 3:00:46 A.M. Eastern Daylight Time,
> ik1wvq@... writes:
>
> Hi to all,

> there is a particular reason to place the coupling loop in the opposite si
> de of the capacitor?
> This is beacuse I am building a mono frequency mag loop for 28 MHz WSPR,
> and the capacitor (9pF FIXED) is a piece of RG8 coax cable without external
> braid slipped INSIDE the copper tube of the loop, and then is pratically
> invisible.
> I would like (for mechanical reasons) to mount the loop with the capacitor
> at BOTTOM side, and put the coupling loop close to the "capacitor".
>
> any contraindications?
>
> thanks in advance for your attention..
> best regards de Mauro IK1WVQ
>

9861. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 08:40:46 UTC
From: qrp.gaijin
Topic: 9845 Message: 9861

--- In loopantennas@yahoogroups.com, "qrpbear" <qrpbear@...> wrote:
>
> There is another way to couple into a loop antenna which is done at the tuning capacitor. It's known as the "army loop method tuner" since it was originally designed for use by the US Army. You can see it here...
>
> http://homepage.ntlworld.com/g4kki.william/army_loop_tuner.htm
>
> Might be worth a try.

This is one of those ideas I keep meaning to try. But then I keep thinking about the massive electrical field around the capacitor, and I just can't bring myself to place the loop controls, cables, and mounting structure near the capacitor where they risk upsetting the loop balance.

Here is a posting describing one user's problems with common mode currents when using the MFJ loop tuner, which is essentially the same as the army loop tuner linked above.

http://www.eham.net/ehamforum/smf/index.php?topic=87076.0

Note how WB6BYU states "such circuits are inherently unbalanced." So you can probably get the army loop tuner to work, but you may have to deal with common mode currents.

9862. Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 14:33:57 UTC
From: heavenzgoat
Topic: 9857 Message: 9862

I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.

Vince

--- In loopantennas@yahoogroups.com, Jay Heyl <yahoogroups@...> wrote:
>
> On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@...>wrote:
>
> > I found a discarded holder for TV dinner trays and thanks to this group I
> > modified it to hold a box loop antenna, it's great because it has a nice
> > handle on top to pick it up and turn it. Speaking of TV dinner, a
> > non-functioning TV was the source for hundreds of feet of magnet wire and a
> > burned up portable transistor radio provided the tuning cap so I'm into
> > this for $0.
>
>
> Excellent!
>
>
> > Here's my question, do you know the math on this? I'm listening to KFI Los
> > Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV,
> > which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB
> > what I'm hearing and how do the radio harmonics work out where I can hear
> > it? The time station fades in and out but it's very clear when it's there
> > under Tim Conway's voice.
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>
> Are you SURE it's WWV? Do you hear, "At the tone, the time will be...", or
> are you just hearing ticks on the second? You didn't mention your location
> so I have no idea if this makes any sense, but could it be Radio Reloj out
> of Cuba? They do non-stop news in Spanish with ticks every second and "RR"
> in Morse code at the top of every minute. Might that be what you're
> hearing. Since you're getting KFI the Spanish might be very faint but the
> ticks and Morse code might pop through. Unless you live near the WWV
> transmitter and it's bleeding all over everything, I'm thinking Radio Reloj
> is more likely.
>

> -- Jay
>

9863. Re: [loopantennas] Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 15:11:16 UTC
From: W2XJ
Topic: 9857 Message: 9863

STR K700? That comes up as a 5.1 surround unit. Can you clarify the model?

Sent from my iPad

On May 3, 2013, at 10:33 AM, "heavenzgoat" <hikeofyourlife@...> wrote:

>
> I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.
>
> Vince
>
> --- In loopantennas@yahoogroups.com, Jay Heyl <yahoogroups@...> wrote:
> >
> > On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@...>wrote:
> >
> > > I found a discarded holder for TV dinner trays and thanks to this group I
> > > modified it to hold a box loop antenna, it's great because it has a nice
> > > handle on top to pick it up and turn it. Speaking of TV dinner, a
> > > non-functioning TV was the source for hundreds of feet of magnet wire and a
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> > > under Tim Conway's voice.
> >
> >
> > Are you SURE it's WWV? Do you hear, "At the tone, the time will be...", or
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> > in Morse code at the top of every minute. Might that be what you're
> > hearing. Since you're getting KFI the Spanish might be very faint but the
> > ticks and Morse code might pop through. Unless you live near the WWV
> > transmitter and it's bleeding all over everything, I'm thinking Radio Reloj
> > is more likely.
> >
> > -- Jay
> >
>
>

9864. Re: [loopantennas] Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 15:19:34 UTC
From: Phil
Topic: 9857 Message: 9864

Hi,
It wouldn't be3 the fact that WWV is on 640KCs, but rather images from the higher frequency SW stations being heard. Many (most) analog consumer grade receivers from years past had very poor front end selectivity and could pick up images in this way, especially if antennas other that the factory loop or loopstick are used, and there isn't a TRF (Tuned RF Amplifier) stage in the receiver.

What's occurring is that the shortwave station is blowing right past the front end of the receiver and mixing with harmonics of the local oscillator in the receiver. The LO of the typical analog receiver were often rich in harmonics and not as "clean" as the later PLL circuits of the more modern digital receivers.

It would be difficult to determine which of the WWV signals you are hearing as that would be dependent on the IF frequency of the receiver (probably 455KCs making the "first image" to be heard on the radio 1550KCs). But I would suspect that it's probably either the WWV 2.5 or 5 MCs signals as they would be strongest at night.

As a side point, when I was a kid in the late '50s I used to listen to shortwave on an "All American 5" (5 tube AC/DC) receiver by putting a longwire antenna on the "Mixer grid" (Loop antenna connection) of the tuning capacitor. It made for very tricky and fast tuning as the harmonics of the LO would tune faster than the main signal (if the LO were at 1600KCs and you tuned off by 1KCs, the 4th harmonic of the LO at 6400KCs would shift by 4KCs.

So, what is your answer? I would recommend more front end selectivity. That may be accomplished by building a small tunable pre-amp that tunes the BCB, between the antenna and the receiver. That should completely eliminate the problem,. I have two such circuits on my web site, designed for longwave they work well at BCB frequencies with appropriate coils.

See them here. . .
http://www.qsl.net/ko6bb/homebrew.html

--
73 de Phil, KO6BB
http://www.qsl.net/ko6bb/ (Web Page)

RADIOS:
Grundigs: S-350 (2006) & G6 (2011).
Icom: R-75 Receiver with 250Hz CW Filter.
Icom: IC-735 Transceiver w 250 HZ CW filter (circa ~1990).
Radio Shack: DX-380 digital portable (circa 1990).

Zenith: Royal-7000 Transoceanic (circa 1969).

Decoder Software: Gray-matter between two Mark 1 earholes.

ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-949E HF Tuner
Homebrew 6 Hz Audio Filter.

ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
Active Whip at 36 Feet AGL for LF/MW.
4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF

Merced, Central California, 37, 18, 37N 120, 30, 6W CM97rh

On 5/3/2013 2:33 PM, heavenzgoat wrote:
> I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.
>
> Vince
>

9865. Re: [loopantennas] Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 15:40:51 UTC
From: Jack Smith
Topic: 9857 Message: 9865

Looked at the service manual for the STR-K700 but the tuner is shown only as a block, ID TN1, with no details.

Some Japanese AM receivers use 450 KHz, not 455 KHz as the IF. If that is the case then ...

Tuned to 640 KHz, the local oscillator runs at 640 + 450 KHz = 1090 KHz.

5th harmonic of the LO is 5450 KHz. This is *exactly* the frequency to receive WWV at 5 MHz, as 5.450 MHz - 5.000 MHz = 450 KHz.

If the IF is at 455, the match fails. LO would be 1095 KHz and the 5th harmonic is 5475 KHz, so the difference frequency is then 5475 - 5000 = 475 KHz. That's far enough away from the 455 KHz IF that the normal selectivity in the 455 KHz IF chain will not pass the WWV mix without major attenuation.

So, my conjecture is:

(a) the tuner uses a 450 KHz IF
(b) 5th harmonic mix is occurring with WWV at 5 MHz.

The fix for it would be a low pass filter at the tuner input, cutoff frequency 2 MHz or so.

Jack K8ZOA

On 5/3/2013 11:11 AM, W2XJ wrote:
> STR K700? That comes up as a 5.1 surround unit. Can you clarify the model?
>
> Sent from my iPad
>
> On May 3, 2013, at 10:33 AM, "heavenzgoat" <hikeofyourlife@...
> <mailto:hikeofyourlife@...>> wrote:
>
>>
>> I'm along the Mex border between San Diego and Imperial counties.
>> Even at a closer distance around 130 miles KFI still fades in and out
>> and the time signal can be heard. I went back and very carefully
>> listened to a recording I made a couple nights ago. I hear tones (not
>> ticks) up to 15 seconds till and then ticks till the minute tone.
>> Finally 12 minutes into the recording I heard the male WWV voice
>> (it's hard to pick out with KFI being a talk station). So, it's
>> clearly WWV, just trying to figure out what it's doing on 640 kHz, I
>> haven't been able to find out anything from the receiver's user or
>> service manuals (it's a Sony STR-K700). BTW I listen to KFI because
>> the San Diego stations don't come in here at night.

>>
>> Vince
>>
>> --- In loopantennas@yahoogroups.com
>> <mailto:loopantennas%40yahoogroups.com>, Jay Heyl <yahoogroups@...>
>> wrote:
>> >
>> > On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@...>wrote:
>> >
>> > > I found a discarded holder for TV dinner trays and thanks to this
>> group I
>> > > modified it to hold a box loop antenna, it's great because it has
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>> > > handle on top to pick it up and turn it. Speaking of TV dinner, a
>> > > non-functioning TV was the source for hundreds of feet of magnet
>> wire and a
>> > > burned up portable transistor radio provided the tuning cap so
>> I'm into
>> > > this for $0.
>> >
>> >
>> > Excellent!
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>> >
>> > > Here's my question, do you know the math on this? I'm listening
>> to KFI Los
>> > > Angeles 640 kHz 9:30 p.m. and I clearly in the background can
>> hear WWV,
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>> > Are you SURE it's WWV? Do you hear, "At the tone, the time will
>> be...", or
>> > are you just hearing ticks on the second? You didn't mention your
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>> > so I have no idea if this makes any sense, but could it be Radio
>> Reloj out
>> > of Cuba? They do non-stop news in Spanish with ticks every second
>> and "RR"
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>> > hearing. Since you're getting KFI the Spanish might be very faint
>> but the
>> > ticks and Morse code might pop through. Unless you live near the WWV
>> > transmitter and it's bleeding all over everything, I'm thinking

```
>> Radio Reloj
>> > is more likely.
>> >
>> > -- Jay
>> >
>>
>
```

9866. Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 15:47:14 UTC
From: sernstfortin
Topic: 9857 Message: 9866

I guess there is a bunch of stuff out there on Loop antennas, theory and formula - and designing for a certain resonance.

I'd start here:
http://earmark.net/gesr/loop/

And there are these:
http://electronbunker.ca/Loop_Antennas.html
http://on2bbp.byze.be/projects/vlf-loop-antenna.php
http://www.frontiernet.net/~jadale/Loop.htm
http://www.vlf.it/octoloop/rlt-n4ywk.htm

--- In loopantennas@yahoogroups.com, "heavenzgoat" <hikeofyourlife@...> wrote:
>
> I found a discarded holder for TV dinner trays and thanks to this group I modified it to hold a box loop antenna, it's great because it has a nice handle on top to pick it up and turn it. Speaking of TV dinner, a non-functioning TV was the source for hundreds of feet of magnet wire and a burned up portable transistor radio provided the tuning cap so I'm into this for $0. Another roll of old twisted pair telephone cable and I could put the antenna across the house away from the computer equipment where my Sony home stereo receiver also sits. It doesn't have an internal ferrite, only two speaker-wire type spring terminals.
>
> Here's my question, do you know the math on this? I'm listening to KFI Los Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV, which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB what I'm hearing and how do the radio harmonics work out where I can hear it? The time station fades in and out but it's very clear when it's there under Tim Conway's voice.
>
> Thanks,
> Vince
>

9867. Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 15:51:48 UTC
From: redsp
Topic: 9857 Message: 9867

From the description you give, this is not WWVB, but may be one of the other WWV signals. From an article in 1971 "Broadcast Engineering",

"The WWV transmitters will remain at Fort Collins, Colorado, broadcasting on the same frequencies of 2.5, 5, 10, 15, 20, and 25 MHz. Power output will not change from the present 10 kW on 5, 10, 15, and 20 MHz and 2.5 kW on the other frequencies."

The article goes on to describe the ticks, tones and a once per minute voice announcement. So I would guess it is the 2.5 MHz signal since that is the closest in frequency, but I couldn't say why you are hearing this at 640 kHz. I assume the IF frequency is 455 kHz, no? So figure out what the LO is and do a little math to see how many harmonics up the scale it would have to be to mix WWV down. It doesn't look promising actually.

http://tf.nist.gov/timefreq/general/pdf/479.pdf

You can read more at wikipedia,

http://en.wikipedia.org/wiki/WWV_(radio_station)#Standard_frequency_signals

Rick

--- In loopantennas@yahoogroups.com, "heavenzgoat" <hikeofyourlife@...> wrote:
>
>
> I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.
>
> Vince
>
> --- In loopantennas@yahoogroups.com, Jay Heyl <yahoogroups@> wrote:
> >
> > On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@>wrote:
> >
> > > I found a discarded holder for TV dinner trays and thanks to this group I
> > > modified it to hold a box loop antenna, it's great because it has a nice
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> > > burned up portable transistor radio provided the tuning cap so I'm into
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> >
> > Excellent!
> >
> >
> > > Here's my question, do you know the math on this? I'm listening to KFI Los
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> > > which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB
> > > what I'm hearing and how do the radio harmonics work out where I can hear
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> >
> > Are you SURE it's WWV? Do you hear, "At the tone, the time will be...", or
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> > ticks and Morse code might pop through. Unless you live near the WWV
> > transmitter and it's bleeding all over everything, I'm thinking Radio Reloj
> > is more likely.
> >
> > -- Jay
> >
>

9868. Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 16:02:01 UTC
From: John
Topic: 9857 Message: 9868

Is your twisted pair telephone wire connected to a single turn of wire on your box loop and the variable capacitor connected only to the multiple turn 'loop'? If so, turning the capacitor should peak the KFI 640 kHz signal at some point, if the coil has something near the required inductance to resonate with the capacitor. I suspect you are using the telephone wire as a wire antenna - and possibly overloading the receiver's untuned front end at night, resulting in your local oscillator's harmonic content beating with WWV at 5 MHz (It works with a 450kHz Intermediate Frequency. With KFI 640 tuned, your local oscillator would be 450 kHz higher = 1,090 kHz. The fifth harmonic - 5,450 kHz - would beat against WWV at 5,000 kHz and pass through a 450 kHz IF. Some front end selectivity would help.).

You might go to AMAZON and look up 'AM Tunable Loop Antenna'. You'll find the Kaito/Grundig AN-200 for ~$25 with free s/h, if you 'try' Prime membership. 'Super Saver' free s/h works, too - for over $25. You can connect the loop to the twisted pair inputs - and tune it when you change frequency. Not as good as 'free' parts, but it works.

John
--- In loopantennas@yahoogroups.com, "heavenzgoat" <hikeofyourlife@...> wrote:
>
> I found a discarded holder for TV dinner trays and thanks to this group I modified it to hold a box loop antenna, it's great because it has a nice handle on top to pick it up and turn it. Speaking of TV dinner, a non-functioning TV was the source for hundreds of feet of magnet wire and a burned up portable transistor radio provided the tuning cap so I'm into this for $0. Another roll of old twisted pair telephone cable and I could put the antenna across the house away from the computer equipment where my Sony home stereo receiver also sits. It doesn't have an internal ferrite, only two speaker-wire type spring terminals.
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> Here's my question, do you know the math on this? I'm listening to KFI Los Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV, which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB what I'm hearing and how do the radio harmonics work out where I can hear it? The time station fades in and out but it's very clear when it's there under Tim Conway's voice.
>
> Thanks,
> Vince
>

9869. Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 18:18:38 UTC
From: vbifyz
Topic: 9857 Message: 9869

--- In loopantennas@yahoogroups.com, "John" <JRTOW3RD@...> wrote:
>
>
> Is your twisted pair telephone wire connected to a single turn of wire on your box loop and the variable capacitor connected only to the multiple turn 'loop'? If so, turning the capacitor should peak the KFI 640 kHz signal at some point, if the coil has something near the required inductance to resonate with the capacitor. I suspect you are using the telephone wire as a wire antenna - and possibly overloading the receiver's untuned front end at night, resulting in your local oscillator's harmonic content beating with WWV at 5 MHz (It works with a 450kHz Intermediate Frequency. With KFI 640 tuned, your local oscillator would be 450 kHz higher = 1,090 kHz. The fifth harmonic - 5,450 kHz - would beat against WWV at 5,000 kHz and pass through a 450 kHz IF. Some front end selectivity would help.).
>
> You might go to AMAZON and look up 'AM Tunable Loop Antenna'. You'll find the Kaito/Grundig AN-200 for ~$25 with free s/h, if you 'try' Prime membership. 'Super Saver' free s/h works, too - for over $25. You can connect the loop to the twisted pair inputs - and tune it when you change frequency. Not as good as 'free' parts, but it works.
>
> John

The tuned loop should provide enough selectivity.
I think the problem is the twisted pair. If it is connected just in parallel to the capacitor on the antenna end, it destroys the selectivity by loading the circuit with the capacitance and losses of its own. So John's first question is important. The proper way to connect the feedline to the loop is to tap at 1 turn. You will see that the peaking is much sharper in this case, and the SW signals are suppressed much better.
The pair itself also picks up signals from the air (unlike coax), bit it shouldn't be bad.

73, Mike

9870. 9.5' Shielded Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 23:29:28 UTC
From: ve7sl@...
Topic: 9870 Message: 9870

Today I have added some new information to my LF Shielded Loop web page to show some pictures of the new 9.5' loop as well as the PCB pattern and parts placement which should make it easier to duplicate:

http://members.shaw.ca/ve7sl/burhans.html

Steve / VE7SL

9871. Re: [loopantennas] Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-04 00:28:25 UTC
From: Jay Heyl
Topic: 9857 Message: 9871

On Fri, May 3, 2013 at 7:33 AM, heavenzgoat <hikeofyourlife@...>wrote:

>
> I'm along the Mex border between San Diego and Imperial counties. Even at
> a closer distance around 130 miles KFI still fades in and out and the time
> signal can be heard. I went back and very carefully listened to a recording
> I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till
> and then ticks till the minute tone. Finally 12 minutes into the recording
> I heard the male WWV voice (it's hard to pick out with KFI being a talk
> station). So, it's clearly WWV, just trying to figure out what it's doing
> on 640 kHz, I haven't been able to find out anything from the receiver's
> user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because
> the San Diego stations don't come in here at night.

Yeah, that's definitely WWV. A little searching after posting that showed
Radio Reloj doesn't appear to broadcast on 640 kHz anyway.

I'm not all that far from you, but I've had great difficulty hearing WWV
even when I'm trying and on the right frequency. You must be in the prime
landing zone for one of the hops from the transmitter.

-- Jay

9872. EZNEC and "shielded" receiving loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-03 19:29:58 UTC
From: ad6zj
Topic: 9872 Message: 9872

Hello,
New to the group but not to antenna modeling. I use EZNEC 5.0
One thing I have never figured out how to do is model a length of coax (as found in a "shielded" loop antenna. I know, it isn't really shielded . I scanned the posts and files areas but didn't find anything on the subject. If anyone has found a way to model coax I would sure like to hear about it.

73
AD6ZJ, Loren

9873. Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-04 14:27:54 UTC
From: heavenzgoat
Topic: 9857 Message: 9873

This is exactly what I was looking for, I figured it had to do with the IF and some harmonic but I haven't wrapped my brain around the maths part of it! WWV on 5 mHz booms in here at night crystal clear, 2.5 not too good. This is a digital home stereo receiver with a great variety of inputs meant mainly for home theater and I'm sure AM radio is provided merely as a courtesy or afterthought. The included air core loop antenna is awful and meant only for local stations.

--- In loopantennas@yahoogroups.com, Jack Smith <Jack.Smith@...> wrote:
>
> Looked at the service manual for the STR-K700 but the tuner is shown
> only as a block, ID TN1, with no details.
>
> Some Japanese AM receivers use 450 KHz, not 455 KHz as the IF. If that
> is the case then ...
>
> Tuned to 640 KHz, the local oscillator runs at 640 + 450 KHz = 1090 KHz.
>
> 5th harmonic of the LO is 5450 KHz. This is *exactly* the frequency to
> receive WWV at 5 MHz, as 5.450 MHz - 5.000 MHz = 450 KHz.
>
> If the IF is at 455, the match fails. LO would be 1095 KHz and the 5th
> harmonic is 5475 KHz, so the difference frequency is then 5475 - 5000 =
> 475 KHz. That's far enough away from the 455 KHz IF that the normal
> selectivity in the 455 KHz IF chain will not pass the WWV mix without
> major attenuation.
>
> So, my conjecture is:
>
> (a) the tuner uses a 450 KHz IF
> (b) 5th harmonic mix is occurring with WWV at 5 MHz.
>
> The fix for it would be a low pass filter at the tuner input, cutoff
> frequency 2 MHz or so.
>
> Jack K8ZOA
>
> On 5/3/2013 11:11 AM, W2XJ wrote:
> > STR K700? That comes up as a 5.1 surround unit. Can you clarify the model?
> >
> > Sent from my iPad
> >
> > On May 3, 2013, at 10:33 AM, "heavenzgoat" <hikeofyourlife@...
> > <mailto:hikeofyourlife@...>> wrote:
> >
> >>

> >> I'm along the Mex border between San Diego and Imperial counties.
> >> Even at a closer distance around 130 miles KFI still fades in and out
> >> and the time signal can be heard. I went back and very carefully
> >> listened to a recording I made a couple nights ago. I hear tones (not
> >> ticks) up to 15 seconds till and then ticks till the minute tone.
> >> Finally 12 minutes into the recording I heard the male WWV voice
> >> (it's hard to pick out with KFI being a talk station). So, it's
> >> clearly WWV, just trying to figure out what it's doing on 640 kHz, I
> >> haven't been able to find out anything from the receiver's user or
> >> service manuals (it's a Sony STR-K700). BTW I listen to KFI because
> >> the San Diego stations don't come in here at night.
> >>
> >> Vince
> >>
> >> --- In loopantennas@yahoogroups.com
> >> <mailto:loopantennas%40yahoogroups.com>, Jay Heyl <yahoogroups@>
> >> wrote:
> >> >
> >> > On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@>wrote:
> >> >
> >> > > I found a discarded holder for TV dinner trays and thanks to this
> >> group I
> >> > > modified it to hold a box loop antenna, it's great because it has
> >> a nice
> >> > > handle on top to pick it up and turn it. Speaking of TV dinner, a
> >> > > non-functioning TV was the source for hundreds of feet of magnet
> >> wire and a
> >> > > burned up portable transistor radio provided the tuning cap so
> >> I'm into
> >> > > this for $0.
> >> >
> >> >
> >> > Excellent!
> >> >
> >> >
> >> > > Here's my question, do you know the math on this? I'm listening
> >> to KFI Los
> >> > > Angeles 640 kHz 9:30 p.m. and I clearly in the background can
> >> hear WWV,
> >> > > which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz.
> >> Is WWVB
> >> > > what I'm hearing and how do the radio harmonics work out where I
> >> can hear
> >> > > it? The time station fades in and out but it's very clear when
> >> it's there
> >> > > under Tim Conway's voice.
> >> >
> >> >
> >> > Are you SURE it's WWV? Do you hear, "At the tone, the time will
> >> be...", or

> >> > are you just hearing ticks on the second? You didn't mention your
> >> location
> >> > so I have no idea if this makes any sense, but could it be Radio
> >> Reloj out
> >> > of Cuba? They do non-stop news in Spanish with ticks every second
> >> and "RR"
> >> > in Morse code at the top of every minute. Might that be what you're
> >> > hearing. Since you're getting KFI the Spanish might be very faint
> >> but the
> >> > ticks and Morse code might pop through. Unless you live near the WWV
> >> > transmitter and it's bleeding all over everything, I'm thinking
> >> Radio Reloj
> >> > is more likely.
> >> >
> >> > -- Jay
> >> >
> >>
> >
>

9874. Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-04 14:35:37 UTC
From: heavenzgoat
Topic: 9857 Message: 9874

The box loop I made is closed, with a separate one turn around the box hooked to the twisted pair running across the open beam in the living room and into the computer/radio office. It's possible WWV at 5 mHz could be getting into that, it's a very strong signal here. Perhaps switching the feed line to coax would solve this. And like I said in another response, the AM radio part of this stereo system probably wasn't designed to have a nicer antenna than the nearly deaf one provided with the unit and I wouldn't be surprised that the front end is overwhelmed. Thanks for everyone's help, I consider the mystery solved!

Vince

--- In loopantennas@yahoogroups.com, "vbifyz" <3ym3ym@...> wrote:
>
>
>
> --- In loopantennas@yahoogroups.com, "John" <JRTOW3RD@> wrote:
> >
> >
> > Is your twisted pair telephone wire connected to a single turn of wire on your box loop and the variable capacitor connected only to the multiple turn 'loop'? If so, turning the capacitor should peak the KFI 640 kHz signal at some point, if the coil has something near the required inductance to resonate with the capacitor. I suspect you are using the telephone wire as a wire antenna - and possibly overloading the receiver's untuned front end at night, resulting in your local oscillator's harmonic content beating with WWV at 5 MHz (It works with a 450kHz Intermediate Frequency. With KFI 640 tuned, your local oscillator would be 450 kHz higher = 1,090 kHz. The fifth harmonic - 5,450 kHz - would beat against WWV at 5,000 kHz and pass through a 450 kHz IF. Some front end selectivity would help.).
> >
> > You might go to AMAZON and look up 'AM Tunable Loop Antenna'. You'll find the Kaito/Grundig AN-200 for ~$25 with free s/h, if you 'try' Prime membership. 'Super Saver' free s/h works, too - for over $25. You can connect the loop to the twisted pair inputs - and tune it when you change frequency. Not as good as 'free' parts, but it works.
> >
> > John
>
> The tuned loop should provide enough selectivity.
> I think the problem is the twisted pair. If it is connected just in parallel to the capacitor on the antenna end, it destroys the selectivity by loading the circuit with the capacitance and losses of its own. So John's first question is important. The proper way to connect the feedline to the loop is to tap at 1 turn. You will see that the peaking is much sharper in this case, and the SW signals are suppressed much better.
> The pair itself also picks up signals from the air (unlike coax), bit it shouldn't be bad.
>
> 73, Mike

>

9875. Re: [loopantennas] Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-04 15:00:36 UTC
From: W2XJ
Topic: 9857 Message: 9875

I think you have got it. That radio is not really intended for DXing. It has too much antenna attached!

Sent from my iPad

On May 4, 2013, at 10:35 AM, "heavenzgoat" <hikeofyourlife@...> wrote:

> The box loop I made is closed, with a separate one turn around the box hooked to the twisted pair running across the open beam in the living room and into the computer/radio office. It's possible WWV at 5 mHz could be getting into that, it's a very strong signal here. Perhaps switching the feed line to coax would solve this. And like I said in another response, the AM radio part of this stereo system probably wasn't designed to have a nicer antenna than the nearly deaf one provided with the unit and I wouldn't be surprised that the front end is overwhelmed. Thanks for everyone's help, I consider the mystery solved!
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> >
> > 73, Mike
> >
>
>

9876. Re: [loopantennas] Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-04 18:38:39 UTC
From: Andy
Topic: 9857 Message: 9876

> It's possible WWV at 5 mHz could be getting into that ...

Just FYI: WWV doesn't transmit at 5 mHz. But you probably meant 5 MHz.

There's a world of difference between the two. Nine orders of magnitude, to be exact. Lots of people don't seem to realize that.

Andy

9877. Re: [loopantennas] Re: WWVB question

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-04 20:08:00 UTC
From: Don
Topic: 9857 Message: 9877

I have "similar" Sony receiver, the STR-D130. The AMBC is terrible except for very strong locals like KFI 640 with high power (50kW) or very close by. To properly hear local KABC 790 (7kW) I had to krank the volume way up to abut half way. So I stuffed a huge signal (IMHO) in from an outside active vertical antenna. Then wrapped 24ft of 20ga wire around that joke of a 4in x 4in plastic loop supplied to transfer the signal. Direct wiring and other methods including coupling loops, tunable loops I fooled around with didn't kut it. Still not good but a cleaner signal - yeah, no AMDX machines are these Sony's. I would not recommend these to anyone. I'm thinking of going back to my chinamart review and changing it.

A better solution that I was going to use was an outboard receiver like my Sony ICF 2010 and patch it into the front panel jack. Has manufacturing consumer electronics products really gotten this cheapo? You would think what used to be a good brand name like Sony with a cheap manufacturing base one could make a terrific or at least a passable radio for less, not just a terrible radio for less and lose any customer base they used have. Also I know not many apparently listen to AMBC anymore. Maybe that is what Sony thinks also?

Not a rant but a terrible section of an otherwise good product for the price point IMHO.

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FUNcube Dongle Pro+
FRG-100B SR-AF & LPF DSP599zx
MFJ-784B HD-1418 AF-1 MSB-1
PA0RDT Mini-Whip x2 @ 25ft
RYO Active Antenna @ 25ft
LFL1010 ALA100L x2

On 04-May-13 07:27, heavenzgoat wrote:
> This is exactly what I was looking for, I figured it had to do with the IF and some harmonic but I haven't wrapped my brain around the maths part of it! WWV on 5 mHz booms in here at night crystal clear, 2.5 not too good. This is a digital home stereo receiver with a great variety of inputs meant mainly for home theater and I'm sure AM radio is provided merely as a courtesy or afterthought. The included air core loop antenna is awful and meant only for local stations.
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>> On 5/3/2013 11:11 AM, W2XJ wrote:
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>>>> the San Diego stations don't come in here at night.
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>>>> Vince
>>>>
>>>> --- In loopantennas@yahoogroups.com

>>>> <mailto:loopantennas%40yahoogroups.com>, Jay Heyl <yahoogroups@>
>>>> wrote:
>>>>>
>>>>> On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@>wrote:
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>>>>>> handle on top to pick it up and turn it. Speaking of TV dinner, a
>>>>>> non-functioning TV was the source for hundreds of feet of magnet
>>>> wire and a
>>>>>> burned up portable transistor radio provided the tuning cap so
>>>> I'm into
>>>>>> this for $0.
>>>>>
>>>>>
>>>>> Excellent!
>>>>>
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>>>>>> Here's my question, do you know the math on this? I'm listening
>>>> to KFI Los
>>>>>> Angeles 640 kHz 9:30 p.m. and I clearly in the background can
>>>> hear WWV,
>>>>>> which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz.
>>>> Is WWVB
>>>>>> what I'm hearing and how do the radio harmonics work out where I
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>>>>>> it? The time station fades in and out but it's very clear when
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>>>>>> under Tim Conway's voice.
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>>>>> Are you SURE it's WWV? Do you hear, "At the tone, the time will
>>>> be...", or
>>>>> are you just hearing ticks on the second? You didn't mention your
>>>> location
>>>>> so I have no idea if this makes any sense, but could it be Radio
>>>> Reloj out
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>>>> and "RR"
>>>>> in Morse code at the top of every minute. Might that be what you're
>>>>> hearing. Since you're getting KFI the Spanish might be very faint
>>>> but the
>>>>> ticks and Morse code might pop through. Unless you live near the WWV
>>>>> transmitter and it's bleeding all over everything, I'm thinking
>>>> Radio Reloj
>>>>> is more likely.
>>>>>
>>>>> -- Jay

>>>>>
>>>>
>>>
>>
>
>
>
>
> ----------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>
>

9878. Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-05 02:29:02 UTC
From: JK De Marco
Topic: 9845 Message: 9878

Thanks for the info about 4NEC2, I was able to run the file saved according to your directions.

A very informative page on voltages and current, electric and magnetic fields near a small loop can be read here:

http://www.w8ji.com/magnetic_receiving_loops.htm

regards,

JK

--- In loopantennas@yahoogroups.com, "qrp.gaijin" <qrp.gaijin@...> wrote:
>
>
>
> --- In loopantennas@yahoogroups.com, "JK De Marco" <py2wm@> wrote:
> > > The loop voltage is highest near the capacitor. For example, in the following image I calculated the electric field around the capacitor for a 2 meter by 2 meter loop antenna resonant at 7 MHz:
> > >
> > > http://postimg.org/image/n091ogqbl/
> >
> > Very nice and informative image! What software did you use to produce it? Thanks.
>
> 4nec2 (available free of charge). It's available here: http://www.qsl.net/4nec2/
>
> For the near field, it can calculate and display in 3D the near E-field and near H-field. Note that in the above image, the horizontal purple line (very high voltage), extending far outside of the loop boundaries along the axis of the top side of the loop, may be some numeric calculation error, maybe due to the geometry or position of the loop. It doesn't make sense that the E-field would extend so far beyond the loop boundaries. (Maybe I should ask on the 4nec2 forum about this anomaly.) Apart from that, the results seem reasonable.
>
> Here is the input file, if you want to experiment with the model. Save the following text to "something.nec" and load it into 4nec2. Note that the field separator, between items on a single line, is the tab character. The loop is resonant at 7.003 MHz, but has not been matched to 50 ohms.
>
> CM
> CE
> SY C=6.6e-11
> GW 1 20 -1 0 0.5 -1 0 2.5 .0127
> GW 2 20 -1 0 2.5 1 0 2.5 .0127
> GW 3 20 1 0 2.5 1 0 0.5 .0127
> GW 4 20 1 0 0.5 -1 0 0.5 .0127

```
> GE 1
> LD 0 2 10 10 0.2 0 C
> LD 5 1 1 20 58000000
> LD 5 2 1 20 58000000
> LD 5 3 1 20 58000000
> LD 5 4 1 20 58000000
> GN 2 0 0 0 5 0.001
> EK
> EX 6 4 10 0 1 0 0
>
> FR 0 0 0 0 7.003 0
> EN
>
```

9879. Re: [loopantennas] Re: correct position of coupling loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-05 02:40:26 UTC
From: ceo@andygardner.com
Topic: 9845 Message: 9879

Interesting read. Thanks!

On 5/05/2013, at 2:29 PM, JK De Marco wrote:

> A very informative page on voltages and current, electric and magnetic fields near a small loop can be read here:
>
> http://www.w8ji.com/magnetic_receiving_loops.htm
>
>

9880. Re: Sony, and.....

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-05 21:05:49 UTC
From: Hue Miller
Topic: 9880 Message: 9880

Loop Antenna News and Information ForumPerhaps the decline in AM receiver quality started with the single-chip receiver design.
I hadn't experienced directly any decline in Sony's AM quality, but I have not any real recent product of theirs. This week I picked up at a Goodwill thrift store a well-used Sony AM-FM portable for $4. Altho it looked less than great, I only wanted it for the variable cap and what I guessed would be a longer than usual ferrite bar. I mean longer than the nothings built into the ubiquitous small clock radios, those terrible things with digital clock and tiny slide rule dial radio. Anyway I thought I'd give this Sony a try before practicing the Aztec ritual on it. To my surprise, it had surprisingly good selectivity, the slide rule tuning was still smooth and the dial wide enough for very comfortable DXing. So this castoff radio will get to survive, after all.
Re the decline of AM band. Years back I took my car to the same name brand dealer's shop and along with other work, requested they look for the extreme noise disturbing the AM. The young work order writer declined to accept that work, and told me that they only got requests for attention to AM only rarely and that AM was only of interest to older people. In this coastal town of 8000, we have one AM station and 2 low power stations above 1600 kHz, one NOAA weather and one US Coast Guard local sea conditions broadcast. From talking to boaters I would have to guess that the number of people locally who know these special broadcasts exist, could be counted on one hand.
On the other hand.....yesterday we had a power outage of a couple hours due to a substation problem. We were stepping into a restaurant to see if they had anything left, and inside some people were discussing the power outage. I heard one tourist type say to the restaurant people, "When I heard the radio go off, I knew something was up." I was pleasantly surprised to hear this: apparently someone else listens to AM, too.
-Hue Miller, at Newport, Oregon

9881. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-06 08:14:21 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 9881

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Sony STR-K700 Service manual/strk700_Service_manual_pg21-46 15.pdf
Uploaded by : judi_blv <judi_blv@...>
Description : Sony STR-K700 Service manual

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/Sony%20STR-K700%20Service%20manual/strk700_Service_manual_pg21-46%2015.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

judi_blv <judi_blv@...>

9882. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-06 08:30:17 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 9882

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Sony STR-K700 Service manual/strk700_Service_manual_pg1-20.pdf
Uploaded by : judi_blv <judi_blv@...>
Description : Sony STR-K700 Service manual_pg. 1-20

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/Sony%20STR-K700%20Service%20manual/strk700_Service_manual_pg1-20.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

judi_blv <judi_blv@...>

9883. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-06 08:31:53 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 9883

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Sony STR-K700 Service manual/strk700_Service_manual_pg21-46.pdf
Uploaded by : judi_blv <judi_blv@...>
Description : Sony STR-K700 Service manual_pg. 21-46

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/Sony%20STR-K700%20Service%20manual/strk700_Service_manual_pg21-46.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

judi_blv <judi_blv@...>

9884. Re: [loopantennas] Digest Number 2249

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-06 08:48:28 UTC
From: Judi Black_Lake
Topic: 9884 Message: 9884

Complete STR-K700 service manual with schematics uploaded to the files.
Yes indeed the IF frequency is 450 KHz also the receiver is
sealed RF unit similar to TV unit.

1a. Re: WWVB question
    Posted by: "heavenzgoat" hikeofyourlife@... hikeofyourlife
    Date: Fri May 3, 2013 7:33 am ((PDT))

I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.

Vince

--- In loopantennas@yahoogroups.com, Jay Heyl <yahoogroups@...> wrote:
>
> On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@...>wrote:
>
> > Here's my question, do you know the math on this? I'm listening to KFI Los
> > Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV,
> > which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB
> > what I'm hearing and how do the radio harmonics work out where I can hear
> > it? The time station fades in and out but it's very clear when it's there
> > under Tim Conway's voice.
>
>
> Are you SURE it's WWV? Do you hear, "At the tone, the time will be...", or
> are you just hearing ticks on the second? You didn't mention your location
> so I have no idea if this makes any sense, but could it be Radio Reloj out
> of Cuba? They do non-stop news in Spanish with ticks every second and "RR"
> in Morse code at the top of every minute. Might that be what you're
> hearing. Since you're getting KFI the Spanish might be very faint but the
> ticks and Morse code might pop through. Unless you live near the WWV
> transmitter and it's bleeding all over everything, I'm thinking Radio Reloj
> is more likely.
>
> -- Jay
>

Messages in this topic (12)

1b. Re: WWVB question
    Posted by: "W2XJ" w2xj@... rameuser
    Date: Fri May 3, 2013 8:11 am ((PDT))

STR K700? That comes up as a 5.1 surround unit. Can you clarify the model?

Sent from my iPad

On May 3, 2013, at 10:33 AM, "heavenzgoat" <hikeofyourlife@...> wrote:

>
> I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.
>
> Vince
>

Messages in this topic (12)

1c. Re: WWVB question
    Posted by: "Phil" ko6bb1@... ko6bb
    Date: Fri May 3, 2013 8:19 am ((PDT))

Hi,
It wouldn't be3 the fact that WWV is on 640KCs, but rather images from the higher frequency SW stations being heard. Many (most) analog consumer grade receivers from years past had very poor front end selectivity and could pick up images in this way, especially if antennas other that the factory loop or loopstick are used, and there isn't a TRF (Tuned RF Amplifier) stage in the receiver.

  What's occurring is that the shortwave station is blowing right past the front end of the receiver and mixing with harmonics of the local oscillator in the receiver. The LO of the typical analog receiver were often rich in harmonics and not as "clean" as the later PLL circuits of the more modern digital receivers.

It would be difficult to determine which of the WWV signals you are hearing as that would be dependent on the IF frequency of the receiver (probably 455KCs making the "first image" to be heard on the radio 1550KCs). But I would suspect that it's probably either the WWV 2.5 or 5 MCs signals as they would be strongest at night.

As a side point, when I was a kid in the late '50s I used to listen to shortwave on an "All American 5" (5 tube AC/DC) receiver by putting a longwire antenna on the "Mixer grid" (Loop antenna connection) of the tuning capacitor. It made for very tricky and fast tuning as the harmonics of the LO would tune faster than the main signal (if the LO were at 1600KCs and you tuned off by 1KCs, the 4th harmonic of the LO at 6400KCs would shift by 4KCs.

So, what is your answer? I would recommend more front end selectivity. That may be accomplished by building a small tunable pre-amp that tunes the BCB, between the antenna and the receiver. That should completely eliminate the problem,. I have two such circuits on my web site, designed for longwave they work well at BCB frequencies with appropriate coils.

See them here. . .
   http://www.qsl.net/ko6bb/homebrew.html

--
73 de Phil, KO6BB
http://www.qsl.net/ko6bb/ (Web Page)

RADIOS:
Grundigs: S-350 (2006) & G6 (2011).
Icom: R-75 Receiver with 250Hz CW Filter.
Icom: IC-735 Transceiver w 250 HZ CW filter (circa ~1990).
Radio Shack: DX-380 digital portable (circa 1990).
Zenith: Royal-7000 Transoceanic (circa 1969).

Decoder Software: Gray-matter between two Mark 1 earholes.

ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-949E HF Tuner
               Homebrew 6 Hz Audio Filter.

ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
            Active Whip at 36 Feet AGL for LF/MW.
            4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF

Merced, Central California, 37, 18, 37N   120, 30, 6W CM97rh

On 5/3/2013 2:33 PM, heavenzgoat wrote:
> I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.
>
> Vince
>

Messages in this topic (12)

1d. Re: WWVB question
    Posted by: "Jack Smith" Jack.Smith@cox.net k8zoa
    Date: Fri May 3, 2013 8:40 am ((PDT))

Looked at the service manual for the STR-K700 but the tuner is shown only as a block, ID TN1, with no details.

Some Japanese AM receivers use 450 KHz, not 455 KHz as the IF. If that is the case then ...

Tuned to 640 KHz, the local oscillator runs at 640 + 450 KHz = 1090 KHz.

5th harmonic of the LO is 5450 KHz. This is *exactly* the frequency to receive WWV at 5 MHz, as 5.450 MHz - 5.000 MHz = 450 KHz.

If the IF is at 455, the match fails. LO would be 1095 KHz and the 5th harmonic is 5475 KHz, so the difference frequency is then 5475 - 5000 = 475 KHz. That's far enough away from the 455 KHz IF that the normal selectivity in the 455 KHz IF chain will not pass the WWV mix without major attenuation.

So, my conjecture is:

(a) the tuner uses a 450 KHz IF
(b) 5th harmonic mix is occurring with WWV at 5 MHz.

The fix for it would be a low pass filter at the tuner input, cutoff frequency 2 MHz or so.

Jack K8ZOA

On 5/3/2013 11:11 AM, W2XJ wrote:
> STR K700? That comes up as a 5.1 surround unit. Can you clarify the model?
>
> Sent from my iPad
>
> On May 3, 2013, at 10:33 AM, "heavenzgoat" <hikeofyourlife@yahoo.com
> <mailto:hikeofyourlife@...>> wrote:
>
>>
>> I'm along the Mex border between San Diego and Imperial counties.
>> Even at a closer distance around 130 miles KFI still fades in and out
>> and the time signal can be heard. I went back and very carefully
>> listened to a recording I made a couple nights ago. I hear tones (not
>> ticks) up to 15 seconds till and then ticks till the minute tone.
>> Finally 12 minutes into the recording I heard the male WWV voice
>> (it's hard to pick out with KFI being a talk station). So, it's
>> clearly WWV, just trying to figure out what it's doing on 640 kHz, I
>> haven't been able to find out anything from the receiver's user or
>> service manuals (it's a Sony STR-K700). BTW I listen to KFI because
>> the San Diego stations don't come in here at night.
>>

>> Vince
>>
>> --- In loopantennas@yahoogroups.com
>> <mailto:loopantennas%40yahoogroups.com>, Jay Heyl <yahoogroups@...>
>> wrote:
>> >
>> > On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@...>wrote:
>> >
>> > > I found a discarded holder for TV dinner trays and thanks to this
>> group I
>> > > modified it to hold a box loop antenna, it's great because it has
>> a nice
>> > > handle on top to pick it up and turn it. Speaking of TV dinner, a
>> > > non-functioning TV was the source for hundreds of feet of magnet
>> wire and a
>> > > burned up portable transistor radio provided the tuning cap so
>> I'm into
>> > > this for $0.
>> >
>> >
>> > Excellent!
>> >
>> >
>> > > Here's my question, do you know the math on this? I'm listening
>> to KFI Los
>> > > Angeles 640 kHz 9:30 p.m. and I clearly in the background can
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>> > > which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz.
>> Is WWVB
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>> can hear
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>> it's there
>> > > under Tim Conway's voice.
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>> >
>> > Are you SURE it's WWV? Do you hear, "At the tone, the time will
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>> > so I have no idea if this makes any sense, but could it be Radio
>> Reloj out
>> > of Cuba? They do non-stop news in Spanish with ticks every second
>> and "RR"
>> > in Morse code at the top of every minute. Might that be what you're
>> > hearing. Since you're getting KFI the Spanish might be very faint
>> but the
>> > ticks and Morse code might pop through. Unless you live near the WWV
>> > transmitter and it's bleeding all over everything, I'm thinking
>> Radio Reloj

>> > is more likely.
>> >
>> > -- Jay
>> >
>>
>

Messages in this topic (12)

1e. Re: WWVB question
    Posted by: "sernstfortin" sernstfortin@... sernstfortin
    Date: Fri May 3, 2013 8:47 am ((PDT))

I guess there is a bunch of stuff out there on Loop antennas, theory and formula - and designing for a certain resonance.

I'd start here:
http://earmark.net/gesr/loop/

And there are these:
http://electronbunker.ca/Loop_Antennas.html
http://on2bbp.byze.be/projects/vlf-loop-antenna.php
http://www.frontiernet.net/~jadale/Loop.htm
http://www.vlf.it/octoloop/rlt-n4ywk.htm

--- In loopantennas@yahoogroups.com, "heavenzgoat" <hikeofyourlife@...> wrote:
>
> I found a discarded holder for TV dinner trays and thanks to this group I modified it to hold a box loop antenna, it's great because it has a nice handle on top to pick it up and turn it. Speaking of TV dinner, a non-functioning TV was the source for hundreds of feet of magnet wire and a burned up portable transistor radio provided the tuning cap so I'm into this for $0. Another roll of old twisted pair telephone cable and I could put the antenna across the house away from the computer equipment where my Sony home stereo receiver also sits. It doesn't have an internal ferrite, only two speaker-wire type spring terminals.
>
> Here's my question, do you know the math on this? I'm listening to KFI Los Angeles 640 kHz 9:30 p.m. and I clearly in the background can hear WWV, which is on 2.5, 5, 10, 15 and 20 mHz, and also WWVB at 60 kHz. Is WWVB what I'm hearing and how do the radio harmonics work out where I can hear it? The time station fades in and out but it's very clear when it's there under Tim Conway's voice.
>
> Thanks,
> Vince
>

Messages in this topic (12)

1f. Re: WWVB question
    Posted by: "redsp" gnuarm.2006@... redsp
    Date: Fri May 3, 2013 8:51 am ((PDT))

From the description you give, this is not WWVB, but may be one of the other WWV signals. From an article in 1971 "Broadcast Engineering",

"The WWV transmitters will remain at Fort Collins, Colorado, broadcasting on the same frequencies of 2.5, 5, 10, 15, 20, and 25 MHz. Power output will not change from the present 10 kW on 5, 10, 15, and 20 MHz and 2.5 kW on the other frequencies."

The article goes on to describe the ticks, tones and a once per minute voice announcement. So I would guess it is the 2.5 MHz signal since that is the closest in frequency, but I couldn't say why you are hearing this at 640 kHz. I assume the IF frequency is 455 kHz, no? So figure out what the LO is and do a little math to see how many harmonics up the scale it would have to be to mix WWV down. It doesn't look promising actually.

http://tf.nist.gov/timefreq/general/pdf/479.pdf

You can read more at wikipedia,

http://en.wikipedia.org/wiki/WWV_(radio_station)#Standard_frequency_signals

Rick

--- In loopantennas@yahoogroups.com, "heavenzgoat" <hikeofyourlife@...> wrote:
>
>
> I'm along the Mex border between San Diego and Imperial counties. Even at a closer distance around 130 miles KFI still fades in and out and the time signal can be heard. I went back and very carefully listened to a recording I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till and then ticks till the minute tone. Finally 12 minutes into the recording I heard the male WWV voice (it's hard to pick out with KFI being a talk station). So, it's clearly WWV, just trying to figure out what it's doing on 640 kHz, I haven't been able to find out anything from the receiver's user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because the San Diego stations don't come in here at night.
>
> Vince
>
> --- In loopantennas@yahoogroups.com, Jay Heyl <yahoogroups@> wrote:
> >
> > On Thu, May 2, 2013 at 9:47 PM, heavenzgoat <hikeofyourlife@>wrote:
> >
> > > I found a discarded holder for TV dinner trays and thanks to this group I
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> >
> >
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> > is more likely.
> >
> > -- Jay
> >
>

Messages in this topic (12)

1g. Re: WWVB question
    Posted by: "John" JRTOW3RD@... jrtow3rd@...t
    Date: Fri May 3, 2013 9:02 am ((PDT))

Is your twisted pair telephone wire connected to a single turn of wire on your box loop and the variable capacitor connected only to the multiple turn 'loop'? If so, turning the capacitor should peak the KFI 640 kHz signal at some point, if the coil has something near the required inductance to resonate with the capacitor. I suspect you are using the telephone wire as a wire antenna - and possibly overloading the receiver's untuned front end at night, resulting in your local oscillator's harmonic content beating with WWV at 5 MHz (It works with a 450kHz Intermediate Frequency. With KFI 640 tuned, your local oscillator would be 450 kHz higher = 1,090 kHz. The fifth harmonic - 5,450 kHz - would beat against WWV at 5,000 kHz and pass through a 450 kHz IF. Some front end selectivity would help.).

You might go to AMAZON and look up 'AM Tunable Loop Antenna'. You'll find the Kaito/Grundig AN-200 for ~$25 with free s/h, if you 'try' Prime membership. 'Super Saver' free s/h works, too - for over $25. You can connect the loop to the twisted pair inputs - and tune it when you change frequency. Not as good as 'free' parts, but it works.

John
--- In loopantennas@yahoogroups.com, "heavenzgoat" <hikeofyourlife@...> wrote:
>
> I found a discarded holder for TV dinner trays and thanks to this group I modified it to hold a box loop antenna, it's great because it has a nice handle on top to pick it up and turn it. Speaking of TV dinner, a non-functioning TV was the source for hundreds of feet of magnet wire and a burned up portable transistor radio provided the tuning cap so I'm into this for $0. Another roll of old twisted pair telephone cable and I could put the antenna across the house away from the computer equipment where my Sony home stereo receiver also

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>
> Thanks,
> Vince
>

Messages in this topic (12)

1h. Re: WWVB question
    Posted by: "vbifyz" 3ym3ym@... vbifyz
    Date: Fri May 3, 2013 11:18 am ((PDT))

--- In loopantennas@yahoogroups.com, "John" <JRTOW3RD@...> wrote:
>
>
> Is your twisted pair telephone wire connected to a single turn of wire on your box loop and the variable capacitor connected only to the multiple turn 'loop'? If so, turning the capacitor should peak the KFI 640 kHz signal at some point, if the coil has something near the required inductance to resonate with the capacitor. I suspect you are using the telephone wire as a wire antenna - and possibly overloading the receiver's untuned front end at night, resulting in your local oscillator's harmonic content beating with WWV at 5 MHz (It works with a 450kHz Intermediate Frequency. With KFI 640 tuned, your local oscillator would be 450 kHz higher = 1,090 kHz. The fifth harmonic - 5,450 kHz - would beat against WWV at 5,000 kHz and pass through a 450 kHz IF. Some front end selectivity would help.).
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>
> John

The tuned loop should provide enough selectivity.
I think the problem is the twisted pair. If it is connected just in parallel to the capacitor on the antenna end, it destroys the selectivity by loading the circuit with the capacitance and losses of its own. So John's first question is important. The proper way to connect the feedline to the loop is to tap at 1 turn. You will see that the peaking is much sharper in this case, and the SW signals are suppressed much better.
The pair itself also picks up signals from the air (unlike coax), bit it shouldn't be bad.

73, Mike

Messages in this topic (12)

1i. Re: WWVB question

Posted by: "Jay Heyl" yahoogroups@... jheyl
Date: Fri May 3, 2013 5:28 pm ((PDT))

On Fri, May 3, 2013 at 7:33 AM, heavenzgoat <hikeofyourlife@...>wrote:

>
> I'm along the Mex border between San Diego and Imperial counties. Even at
> a closer distance around 130 miles KFI still fades in and out and the time
> signal can be heard. I went back and very carefully listened to a recording
> I made a couple nights ago. I hear tones (not ticks) up to 15 seconds till
> and then ticks till the minute tone. Finally 12 minutes into the recording
> I heard the male WWV voice (it's hard to pick out with KFI being a talk
> station). So, it's clearly WWV, just trying to figure out what it's doing
> on 640 kHz, I haven't been able to find out anything from the receiver's
> user or service manuals (it's a Sony STR-K700). BTW I listen to KFI because
> the San Diego stations don't come in here at night.

Yeah, that's definitely WWV. A little searching after posting that showed
Radio Reloj doesn't appear to broadcast on 640 kHz anyway.

I'm not all that far from you, but I've had great difficulty hearing WWV
even when I'm trying and on the right frequency. You must be in the prime
landing zone for one of the hops from the transmitter.

-- Jay

Messages in this topic (12)

---

2. 9.5' Shielded Loop
Posted by: ve7sl@... cqer01
Date: Fri May 3, 2013 4:29 pm ((PDT))

Today I have added some new information to my LF Shielded Loop web page to show some
pictures of the new 9.5' loop as well as the PCB pattern and parts placement which should
make it easier to duplicate:

http://members.shaw.ca/ve7sl/burhans.html

Steve / VE7SL

Messages in this topic (1)

---

3. EZNEC and "shielded" receiving loops
Posted by: "ad6zj" ad6zj@sbcglobal.net ad6zj
Date: Fri May 3, 2013 8:15 pm ((PDT))

Hello,
New to the group but not to antenna modeling. I use EZNEC 5.0
One thing I have never figured out how to do is model a length of coax (as found in a
"shielded" loop antenna. I know, it isn't really shielded . I scanned the posts and files
areas but didn't find anything on the subject. If anyone has found a way to model coax I

would sure like to hear about it.

73
AD6ZJ, Loren

Messages in this topic (1)

If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!

Yahoo! Groups Links

9885. RE: [loopantennas] CAT-5 cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 17:42:57 UTC
From: Brian Burns
Topic: 9830 Message: 9885

Hello All,

My shack lends itself nicely to transmitting north and south with a dipole or vertical skywire loop, but the lot is way too narrow for stringing up such an antenna for east west work. It occurred to me that a simple full wave loop for 17 meters could be supported by a Dacron line at 43 feet that is already in place. Since a simple loop is bi-directional, there would only be the need to rotate it 90° to cover all directions, and it would have a db or two gain over a dipole.

So I looked up the full wave loop in the 1997 ARRL antenna handbook--downloaded for free from the AMforever forum, an excellent source for free downloads of back issues of magazines and handbooks. According to that handbook the nominal feed impedance of a full wave loop at resonance is 100 ohms.

That value sounded familiar, so I checked, and CAT-5 twisted pair cable has that impedance. I have a fond remembrance of the availability of 72 ohm balanced line, back in the day, and was wondering if anyone has tried feeding any sort of antenna with CAT-5 cable, or any other twisted pair configuration. Twisted pair supposedly picks up less noise and other signals, so it could well be a good receiving antenna transmission line.

CAT-5 may not have good weatherability for outdoor use, but that brings up the possibility of DIY twisted pair transmission line, and that really tickles my frugal Scottish whiskers!

Any thoughts or experiences on the subject would be appreciated (:->)

Cheers,

Brian Burns

9886. Re: [loopantennas] CAT-5 cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 18:10:34 UTC
From: Phil
Topic: 9830 Message: 9886

Hi,
I use a CAT6 cable to connect my "Active" longwave loop to the controller in the house. For my purposes it is ideal as I use one pair to feed power to the loop-amp, another pair to feed a variable Voltage from the "Tune" potentiometer in the controller to the Varactor tuning diodes, and finally, a pair to bring the signal back down into the house. In my case I use a BalUn at each end of the feedline to keep the line balanced, and RF chokes in each of the DC lines so that the loop is totally isolated from ground and noise on the DC lines.

It works very well for me, but of course, the highest frequency of the loop is 530KCs. Not sure how it would work on higher frequencies.

NOTE: There are different grades of CAT5 cable, some optimized for higher frequencies, (that's what I had). Without doing research (again) better stuff is called CAT6. . .

And yes, you CAN get UV resistant CAT cable, that's what I have, and it's grey colored. If in doubt, you can always spray paint it with a non-lead paint.

--
73 de Phil, KO6BB
http://www.qsl.net/ko6bb/ (Web Page)

RADIOS:
Grundigs: S-350 (2006) & G6 (2011).
Icom: R-75 Receiver with 250Hz CW Filter.
Icom: IC-735 Transceiver w 250 HZ CW filter (circa ~1990).
Radio Shack: DX-380 digital portable (circa 1990).
Zenith: Royal-7000 Transoceanic (circa 1969).

Decoder Software: Gray-matter between two Mark 1 earholes.

ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-949E HF Tuner
Homebrew 6 Hz Audio Filter.

ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
Active Whip at 36 Feet AGL for LF/MW.
4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF

Merced, Central California, 37, 18, 37N 120, 30, 6W CM97rh

On 5/13/2013 5:42 PM, Brian Burns wrote:
>
>
> Hello All,

>
> My shack lends itself nicely to transmitting north and south with a
> dipole or vertical skywire loop, but the lot is way too narrow for
> stringing up such an antenna for east west work. It occurred to me
> that a simple full wave loop for 17 meters could be supported by a
> Dacron line at 43 feet that is already in place. Since a simple loop
> is bi-directional, there would only be the need to rotate it 90? to
> cover all directions, and it would have a db or two gain over a dipole.
>
> So I looked up the full wave loop in the 1997 ARRL antenna
> handbook--downloaded for free from the AMforever forum, an excellent
> source for free downloads of back issues of magazines and handbooks.
> According to that handbook the nominal feed impedance of a full wave
> loop at resonance is 100 ohms.
>
> That value sounded familiar, so I checked, and CAT-5 twisted pair
> cable has that impedance. I have a fond remembrance of the
> availability of 72 ohm balanced line, back in the day, and was
> wondering if anyone has tried feeding any sort of antenna with CAT-5
> cable, or any other twisted pair configuration. Twisted pair
> supposedly picks up less noise and other signals, so it could well be
> a good receiving antenna transmission line.
>
> CAT-5 may not have good weatherability for outdoor use, but that
> brings up the possibility of DIY twisted pair transmission line, and
> that really tickles my frugal Scottish whiskers!
>
> Any thoughts or experiences on the subject would be appreciated (:->)?
>
> Cheers,
>
> Brian Burns
>
>

9887. Re: [loopantennas] CAT-5 cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 18:18:40 UTC
From: brian nsl
Topic: 9830 Message: 9887

Brian,
I have used loop antennas both vertical and horizontal since
starting my SWL days in 1970.
Normally these have a been a full wave on 40m (138.5 ft) since the garden
can only take around 200ft perimeter and that is in ' no mans land '
coverage wise, the height has never exceeded 35ft.
All the loops have had the same feed system, an electrical 1/4 wave of 120 ohm
feeder (appx 23.5ft) which is no more than 15 amp rated black / red DC lead.
All fed from a Kenwood TS-130V with 5 watts SSB.. and to date 245 DXCC
entities worked / confirmed using 40 - 10m bands.
They do work despite the nickname of ' skywire ' hi!
A point to remember is that loops attract static and I have suffered a few ' belts '
over the years !!!!
Regards,
72, Brian, GØNSL.
----- Original Message -----
From: Brian Burns
To: loopantennas@yahoogroups.com
Sent: Monday, May 13, 2013 6:42 PM
Subject: RE: [loopantennas] CAT-5 cable?

9888. RE: [loopantennas] CAT-5 cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 19:19:27 UTC
From: Jerry Flanders
Topic: 9830 Message: 9888

When I needed to make up a set of long
"component" cables for my HDTV in the bedroom (to
reach from the DISH rx in the den), I looked up
the specs on CAT5 cable and found it to be a good
choice. I just put 3 rca plugs at each end and
marked them color-wise and plugged it all up.
Made an extra run for the stereo audio. Works
fine - no crosstalk, good freq response, etc. This was an 80 ft run.

The specs show extremely low crosstalk, and that
also means low/no pickup from external sources.

IIRC, the impedance for a single pair was 200
ohms, so two pairs paralleled would give 100 ohms
and all 4 pairs paralleled would give 50. I think
it would be an excellent feed line for up to maybe 100 watts RF.

Jerry W4UK

At 01:42 PM 5/13/2013, you wrote:

>Hello All,
>
>My shack lends itself nicely to transmitting
>north and south with a dipole or vertical
>skywire loop, but the lot is way too narrow for
>stringing up such an antenna for east west work.
>It occurred to me that a simple full wave loop
>for 17 meters could be supported by a Dacron
>line at 43 feet that is already in place. Since
>a simple loop is bi-directional, there would
>only be the need to rotate it 90° to cover all
>directions, and it would have a db or two gain over a dipole.
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>So I looked up the full wave loop in the 1997
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>the AMforever forum, an excellent source for
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>nominal feed impedance of a full wave loop at resonance is 100 ohms.
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>That value sounded familiar, so I checked, and
>CAT-5 twisted pair cable has that impedance. I
>have a fond remembrance of the availability of
>72 ohm balanced line, back in the day, and was
>wondering if anyone has tried feeding any sort

>of antenna with CAT-5 cable, or any other
>twisted pair configuration. Twisted pair
>supposedly picks up less noise and other
>signals, so it could well be a good receiving antenna transmission line.
>
>CAT-5 may not have good weatherability for
>outdoor use, but that brings up the possibility
>of DIY twisted pair transmission line, and that
>really tickles my frugal Scottish whiskers!
>
>Any thoughts or experiences on the subject would be appreciated (:->)
>
>Cheers,
>
>Brian Burns
>
>
>
>
>
>

9889. Re: CAT-5 cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 19:25:39 UTC
From: John
Topic: 9830 Message: 9889

Another commonly available balanced line in the 70-100 Ohm range is standard #18/#20 Zip cord - once known as lamp cord, but today known as speaker wire! Seriously - the vf was ~.66 back then - modern dielectrics may have changed that. Certainly there must be UV-tolerant variants now. Once upon a time, there was a company - maybe B&W - that made SWL receive-only trap dipoles that came either with the balanced Zip cord or a coax connector. For a receive feedline, it'll work well - if the dielectric is weatherproof. A lot of speaker cable is no longer pure copper - it's 'CCA' - Copper Clad Aluminum wire. Probably wouldn't do well flapping in the breeze - for long (Plastic failure of the Al core.).

I used it, years ago, to feed a homebrew Tilted Terminated Folded Dipole with, including a 2:1 (n ratio - Z ratio: 4:1) Z transformer (400 Ohm to ~100 Ohm) at the feedpoint insulator. It left the TTFD with no DC path to ground, so I went to 450 Ohm ladder line to a homebrew balanced tuner with a CT ground to drain off the static charge. Received signal strengths from common/stable SW stations, like CFRX, CHU, Radio Australia, WRNO, were similar in strength averaged over a few days. The TTFD is a great low noise antenna that pretty much loses the FD/Dipole bi-directional nature and seems more sensitive than it's signal dissipating resistor would imply. A 'loop' of sorts!

John

9890. Re: [loopantennas] Re: CAT-5 cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 19:48:11 UTC
From: Jack Smith
Topic: 9830 Message: 9890

A few years ago, I measured the loss of typical zip cord, using lab grade equipment, taking due care to treat the line as balanced. Results:

The second column, "measured loss" is for a 17.4 ft length and the loss / 100 ft is extrapolated from that measured length. This is with matched loads - i.e., 109 ohms source and termination impedance (measured Zo for this piece of zip cord as 109 ohms). Operating it into a mis-matched load will, of course, increase the loss.

Frequency MHz Measured Loss (dB) Loss (dB)/100 ft
5 0.4 2.3
10 0.6 3.5
15 0.8 4.6
20 0.95 5.5
25 1.2 6.9
30 1.4 8.1

It's not the worst possible transmission line, I suppose, although it has greater loss than RG-174 (3.3 dB / 100 ft @ 10 MHz versus 3.5 dB/100 ft measured for the twin lead), it has the virtue of being available in an emergency from a hardware store. And, not all zip cord is equal. However, cables constructed to carry signals use rather different dielectric material than those constructed to carry 50/60 Hz power and that difference translates into significant loss.

At 10 MHz, CAT-5 ethernet cable has a loss of about 2 dB/100 ft, despite using significantly smaller diameter wire than for the measured zip cord.

So, will zip cord work as a transmission line? Yes. Does it work well? No, at least if one views the term "well" as including the concept of low loss.

Jack K8ZOA

On 5/13/2013 3:25 PM, John wrote:
>
> Another commonly available balanced line in the 70-100 Ohm range is
> standard #18/#20 Zip cord - once known as lamp cord, but today known
> as speaker wire! Seriously - the vf was ~.66 back then - modern
> dielectrics may have changed that. Certainly there must be UV-tolerant
> variants now. Once upon a time, there was a company - maybe B&W - that
> made SWL receive-only trap dipoles that came either with the balanced
> Zip cord or a coax connector. For a receive feedline, it'll work well
> - if the dielectric is weatherproof. A lot of speaker cable is no
> longer pure copper - it's 'CCA' - Copper Clad Aluminum wire. Probably
> wouldn't do well flapping in the breeze - for long (Plastic failure of
> the Al core.).

>
> I used it, years ago, to feed a homebrew Tilted Terminated Folded
> Dipole with, including a 2:1 (n ratio - Z ratio: 4:1) Z transformer
> (400 Ohm to ~100 Ohm) at the feedpoint insulator. It left the TTFD
> with no DC path to ground, so I went to 450 Ohm ladder line to a
> homebrew balanced tuner with a CT ground to drain off the static
> charge. Received signal strengths from common/stable SW stations, like
> CFRX, CHU, Radio Australia, WRNO, were similar in strength averaged
> over a few days. The TTFD is a great low noise antenna that pretty
> much loses the FD/Dipole bi-directional nature and seems more
> sensitive than it's signal dissipating resistor would imply. A 'loop'
> of sorts!
>
> John
>
>

9891. RE: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 22:46:33 UTC
From: Brian Burns
Topic: 9830 Message: 9891

Hello again All,

Thanks very much for all the responses on CAT-5!

A week ago a guitar making student of mine, who happens to be an EE, dumped a carload of "gems and junque" in my shop. Among the gems was a working 'scope, so I was happy to take on the disposal of the rest. Amongst what I thought of as junque was a 300 foot spool of standard RJ-11 telephone hook-up wire (several lifetime's supply). It's the 4 conductor standard stuff.

Until Jerry mentioned that CAT-5 would probably be useable up to 100 watts of RF, the possibility of using the RJ-11 wire as transmission line hadn't entered my head. There is a powerful incentive for using what you've got, if you have taken the vows of poverty, as I have.

I googled around for quite a while, but couldn't find any data on the characteristic impedance of the stuff, and was wondering if anyone happens to know anything about it. I would probably just parallel pairs of conductors to make a two conductor parallel line out of it.

Cheers,

Brian

9892. Re: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 23:11:37 UTC
From: Jack Smith
Topic: 9830 Message: 9892

I assume you mean the 4 conductor indoor (local premises) wiring cable - red, black, yellow and green. My Bell System friends called this JK cable if I remember correctly, but don't hold me to that.

It's also known, subsequently, as Cat-1 cable, and the normal recommendation is not to use it above a few hundred KHz.

On the other hand, there are umpteen miles of that wire still in use, and some of it is used with DSL which operates in the few MHz range at the upper end, so it will pass RF. The question is how well it will pass the RF as in a normal residential installation, the local premises wire will be only a few dozen feet in length and the overall circuit response is dominated by the distribution plant wiring, not the local premises wire. (Lots of equalization is used in the DSL modems to offset the high loss in telephone distribution plant once you up above audio range.)

The wire I'm thinking of is solid conductor, and probably would rapidly fail from metal fatigue if flexed by the wind. Also don't know if the jacket is UV stabilized of waterproof, as it's strictly an indoor use only cable.

As for impedance, I can't recall any specs on it, but I suspect from the dimensions it's in the 100 ohm range. Given the normal wire and insulation dimensions, it's difficult to make a cable the size of indoor telephone wire much outside the 100 ohm figure.

So, yes it can be made to work--wouldn't be my first choice but if that's the only way to transport RF, give it a try.

Jack K8ZOA

On 5/13/2013 6:46 PM, Brian Burns wrote:
>
> Hello again All,
>
> Thanks very much for all the responses on CAT-5!
>
> A week ago a guitar making student of mine, who happens to be an EE,
> dumped a carload of "gems and junque" in my shop. Among the gems was a
> working 'scope, so I was happy to take on the disposal of the rest.
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> watts of RF, the possibility of using the RJ-11 wire as transmission
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> pairs of conductors to make a two conductor parallel line out of it.
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> Cheers,
>
> Brian
>
>

9893. RE: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-13 23:42:41 UTC
From: Brian Burns
Topic: 9830 Message: 9893
Attachments: 1 described; binary payloads are missing from this source WARC

Hello Jack,

Thanks for the info!

~ I assume you mean the 4 conductor indoor (local premises) wiring cable - red, black, yellow and green.

Yep, that's it all right, but it happens to be stranded. Each conductor is made up of 7 strands of .006" diameter copper wire-I had to put on my 10X Optivisor to see the stuff!

~ On the other hand, there are umpteen miles of that wire still in use, and some of it is used with DSL which operates in the few MHz range at the upper end, so it will pass RF. The question is how well it will pass the RF.

~ Also don't know if the jacket is UV stabilized of waterproof, as it's strictly an indoor use only cable.

~ As for impedance, I can't recall any specs on it, but I suspect from the dimensions it's in the 100 ohm range. Given the normal wire and insulation dimensions, it's difficult to make a cable the size of indoor telephone wire much outside the 100 ohm figure.

The antenna will be located right outside my shack wall, and will be a PVC pipe that goes up vertically to support a couple of cross members that in turn support the loop. The phone cable could run up the interior of the PVC, and exit at the lower center of the loop so that it wouldn't be exposed to UV. The total length of the run would be about 30 feet.

I have a Harvey Wells antenna tuner that has a balanced output for open wire line, so it can match the transmitter to the phone line nicely. If the 100 ohm impedance of the line matches the 100 ohm impedance of the antenna, then "Bob's my uncle", right? I do love the idea of matching the impedances everywhere, even if it really doesn't matter very much (;->).

~ So, yes it can be made to work--wouldn't be my first choice but if that's the only way to transport RF, give it a try.

I could probably sell the spool of phone cable for enough to buy the "first choice", but there is something appealing about the idea of using the phone cable. BTW what would be your first choice?

Cheers,

Brian

.

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9894. Re: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-14 00:00:49 UTC
From: Jack Smith
Topic: 9830 Message: 9894
Attachments: 1 described; binary payloads are missing from this source WARC

First choice depends whether your design requires balanced or unbalanced feed line and the required impedance.

If high Z balanced, then 450 ohm ladder line, window type is reasonably low loss, mechanically decent and not terribly expensive. If you need low Z balanced line, there is a 72 or 75 ohm paired balanced line available, made with insulation designed for RF use. Some of these are available with copperweld conductors - that's fine if you need mechanical strength, but your description suggests a standard copper conductor version will be mechanically satisfactory. (Copperweld is miserable stuff to work with so I try to avoid it unless absolutely necessary.)

If unbalanced then there is a wealth of coaxial cables to consider. For a 30 ft run, it probably doesn't matter much, but RG-58 for small diameter coax or RG-213 for larger diameter would be it for me. Look for high quality cable, stay away from aluminum braid types unless you know exactly what you are doing. I would not buy cheap import coax cable unless you have the knowledge and experience to separate good from bad because a lot of it is really trash.

I've written a bit about coax cable:
http://www.cliftonlaboratories.com/the_curious_case_of.htm
http://www.cliftonlaboratories.com/Aug_2011.htm skip the first couple entries.

Jack K8ZOA

On 5/13/2013 7:42 PM, Brian Burns wrote:
>
> Hello Jack,
>
> Thanks for the info!
>
> ~ I assume you mean the 4 conductor indoor (local premises) wiring
> cable - red, black, yellow and green.
>
> Yep, that's it all right, but it happens to be stranded. Each
> conductor is made up of 7 strands of .006" diameter copper wire---I
> had to put on my 10X Optivisor to see the stuff!
>
>
> ~ On the other hand, there are umpteen miles of that wire still in
> use, and some of it is used with DSL which operates in the few MHz
> range at the upper end, so it will pass RF. The question is how well

> it will pass the RF...
>
> ~ Also don't know if the jacket is UV stabilized of waterproof, as
> it's strictly an indoor use only cable.
>
> ~ As for impedance, I can't recall any specs on it, but I suspect from
> the dimensions it's in the 100 ohm range. Given the normal wire and
> insulation dimensions, it's difficult to make a cable the size of
> indoor telephone wire much outside the 100 ohm figure.
>
> The antenna will be located right outside my shack wall, and will be a
> PVC pipe that goes up vertically to support a couple of cross members
> that in turn support the loop. The phone cable could run up the
> interior of the PVC, and exit at the lower center of the loop so that
> it wouldn't be exposed to UV. The total length of the run would be
> about 30 feet.
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> nicely. If the 100 ohm impedance of the line matches the 100 ohm
> impedance of the antenna, then "Bob's my uncle", right? I do love the
> idea of matching the impedances everywhere, even if it really doesn't
> matter very much (;->)...
>
>
> ~ So, yes it can be made to work--wouldn't be my first choice but if
> that's the only way to transport RF, give it a try.
>
> I could probably sell the spool of phone cable for enough to buy the
> "first choice", but there is something appealing about the idea of
> using the phone cable. BTW what would be your first choice?
>
> Cheers,
>
> Brian
>
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>

9895. Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-14 22:05:43 UTC
From: Brian Burns
Topic: 9895 Message: 9895

Hello Jack,

Thanks for all the references!

~ First choice depends whether your design requires balanced or unbalanced feed line and the required impedance.

Well a simple full wave loop is a balanced design, and if the '97 ARRL antenna handbook is to be believed, it has an impedance of 100 ohms at the feed point at resonance-hence my interest in low impedance, balanced feed-line.

So I got googling around to see if 75 ohm twin-lead is still available anywhere, and it is apparently "unobtanium". But I did run across this DIY suggestion on the AMfone forum in 2005:

"Get a spool of #20 or #22 teflon wire, and twist a couple twists per inch, and you will be quite close to 75 ohms."

This is just the sort of suggestion to tickle my whiskers. So, by varying the parameters a bit, it ought to be possible to make a twisted pair to whatever low impedance you might need.

On another forum I got told how little difference it makes to match the transmission line to the antenna as long as the transmitter is matched to the transmission line. But this is a hobby, right? And it looks like a fun, low cost research project to try making my own transmission line of just the right impedance.

Now, where do I get the cash for an MFJ 259B?

Cheers,

Brian Burns

Intelligence is common--wisdom is rare. Thomas Sowell is a wise man:

<http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1>
http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1

9896. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-14 22:32:51 UTC
From: Rick Karlquist
Topic: 9895 Message: 9896

It is easy to get CAT-5 cable, which has 100 ohm twisted pairs, and connect them in parallel to get 50, 33.3, or 25 ohms. It has low loss polyethylene dielectric, which makes it better than vinyl zipcord, especially as the frequency goes up. It is difficult to get much less than 50 ohms in a single twisted pair, even if you make your own out of thick wire with thin teflon insulation.

Rick N6RK

9897. RE: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-14 22:57:22 UTC
From: Brian Burns
Topic: 9895 Message: 9897
Attachments: 1 described; binary payloads are missing from this source WARC

Hello Rick,

I found an on-line calculator for twisted pair parameters:

http://www.eeweb.com/toolbox/twisted-pair

~ It is easy to get CAT-5 cable, which has 100 ohm twisted pairs,
and connect them in parallel to get 50, 33.3, or 25 ohms.
It has low loss polyethylene dielectric, which makes it
better than vinyl zipcord, especially as the frequency
goes up. It is difficult to get much less than 50 ohms in
a single twisted pair, even if you make your own out of
thick wire with thin teflon insulation.

The impedances that I would be looking for are 72 ohms for a dipole and 100
ohms for a loop, so those should be practical values to come up with using
available wire. I'll run some numbers through the on-line calculator when I
get a chance.

I'm also curious about the supposedly low noise pickup by twisted pair for
receiving applications. Anybody have any experience along these lines?

Cheers,

Brian

.

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9898. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-14 23:04:18 UTC
From: Jack Smith
Topic: 9895 Message: 9898

It is possible to operate a transmission line with an intentional mismatch at the antenna.

The consequence of the mismatch is to increase the transmission line loss and peak voltage. If the transmission line is short, then the increased loss and higher peak voltage may be of little to no concern. Or, if the transmission line is very low loss, increased losses may not be important. The classic example is open wire line, spaced with ceramic or the like spreaders.

If you are using coaxial cable, then greater attention needs to be paid to the increased loss potential from a mismatch. In some cases it won't matter and in others it may be undesirable, depending on the degree of the mismatch, cable length, cable type, operating power and the like.

So if you were told that matching the antenna to the transmission line is not important, you were given greatly simplified information. Perhaps OK as a 0th order approximation, but not much more than that.

Jack K8ZOA

On 5/14/2013 6:05 PM, Brian Burns wrote:
>
> Hello Jack,
>
> Thanks for all the references!
>
> ~ First choice depends whether your design requires balanced or
> unbalanced feed line and the required impedance.
>
> Well a simple full wave loop is a balanced design, and if the '97 ARRL
> antenna handbook is to be believed, it has an impedance of 100 ohms at
> the feed point at resonance---hence my interest in low impedance,
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> anywhere, and it is apparently "unobtanium". But I did run across this
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> "Get a spool of #20 or #22 teflon wire, and twist a couple twists per
> inch, and you will be quite close to 75 ohms."
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> twisted pair to whatever low impedance you might need.
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> On another forum I got told how little difference it makes to match
> the transmission line to the antenna as long as the transmitter is
> matched to the transmission line. But this is a hobby, right? And it
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> transmission line of just the right impedance.
>
> Now, where do I get the cash for an MFJ 259B?
>
> Cheers,
>
> Brian Burns
>
>
> Intelligence is common--wisdom is rare. Thomas Sowell is a wise man:
>
> http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1
>
>

9899. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-14 23:08:10 UTC
From: Adrian Flynn
Topic: 9895 Message: 9899
Attachments: 1 described; binary payloads are missing from this source WARC

Yep,
Back in the day we twisted 300 ohm twin lead at 2 twists per foot to reduce noise and image pick up, course this was 55 to 60 years ago and YMMV.
We twisted long run speaker and unshielded cables on PA systems to help keep those rotten CB'ers out.
73
Adrian KF7DYU

On Tue, May 14, 2013 at 6:57 PM, Brian Burns <brian@...>wrote:

> **
>
>
> Hello Rick,****
>
> ** **
>
> I found an on-line calculator for twisted pair parameters:****
>
> ** **
>
> http://www.eeweb.com/toolbox/twisted-pair****
>
> ** **
>
> ~ It is easy to get CAT-5 cable, which has 100 ohm twisted pairs,
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> and connect them in parallel to get 50, 33.3, or 25 ohms.
> It has low loss polyethylene dielectric, which makes it
> better than vinyl zipcord, especially as the frequency
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>
> ** **
>
> The impedances that I would be looking for are 72 ohms for a dipole and
> 100 ohms for a loop, so those should be practical values to come up with
> using available wire. I'll run some numbers through the on-line calculator
> when I get a chance.****
>
> ** **
>
> I'm also curious about the supposedly low noise pickup by twisted pair for

> receiving applications. Anybody have any experience along these lines?****
>
> ** **
>
> Cheers,****
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> ** **
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> Brian****
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9900. RE: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-14 23:50:37 UTC
From: Brian Burns
Topic: 9895 Message: 9900
Attachments: 3 described; binary payloads are missing from this source WARC

Hello Adrian,

I remember back in the day (1950's) that it was SOP to twist 300 ohm twin-lead for TV reception. This was in South Texas and the nearest TV station was in San Antonio. You think crummy programming is a current thing? Back then it was mostly wrestling, and a snowy picture.

Cheers,

Brian

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of Adrian Flynn
Sent: Tuesday, May 14, 2013 4:08 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Low impedance twin-lead

Yep,

Back in the day we twisted 300 ohm twin lead at 2 twists per foot to reduce noise and image pick up, course this was 55 to 60 years ago and YMMV.

We twisted long run speaker and unshielded cables on PA systems to help keep those rotten CB'ers out.

73

Adrian KF7DYU

On Tue, May 14, 2013 at 6:57 PM, Brian Burns <brian@...>
wrote:

Hello Rick,

I found an on-line calculator for twisted pair parameters:

http://www.eeweb.com/toolbox/twisted-pair

~ It is easy to get CAT-5 cable, which has 100 ohm twisted pairs,

and connect them in parallel to get 50, 33.3, or 25 ohms.
It has low loss polyethylene dielectric, which makes it
better than vinyl zipcord, especially as the frequency
goes up. It is difficult to get much less than 50 ohms in
a single twisted pair, even if you make your own out of
thick wire with thin teflon insulation.

The impedances that I would be looking for are 72 ohms for a dipole and 100 ohms for a loop, so those should be practical values to come up with using available wire. I'll run some numbers through the on-line calculator when I get a chance.

I'm also curious about the supposedly low noise pickup by twisted pair for receiving applications. Anybody have any experience along these lines?

Cheers,

Brian

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9901. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 00:01:37 UTC
From: Adrian Flynn
Topic: 9895 Message: 9901
Attachments: 1 described; binary payloads are missing from this source WARC

Brian
I remember when I moved to Phoenix in 1952 having only one channel and using rabbit ears? LOL
This was after living in Erie, PA with 6 stations to watch from USA & Canada, what a let down for a 6 year old.
Then in 1983 I married my 3rd wife (31 years next month) and her grandmother lived in Gila Bend AZ, using a Conical Ant and Twin lead over a 1000' mountain to get 2 out of 9 channels (3 and 5 snowy others clear but could fade) in Phoenix with no Cable in the area, took a lot of work over a year but I got her 7 of the 9 channels and a year later we put in Primestar for her.
She didn't know what to do with so many *clear* channels
73
Adrian
On Tue, May 14, 2013 at 7:50 PM, Brian Burns <brian@...>wrote:

> **
>
>
> Hello Adrian,****
>
> ** **
>
> I remember back in the day (1950’s) that it was SOP to twist 300 ohm
> twin-lead for TV reception. This was in South Texas and the nearest TV
> station was in San Antonio. You think crummy programming is a current
> thing? Back then it was mostly wrestling, and a snowy picture. ****
>
> ** **
>
> Cheers,****
>
> ** **
>
> Brian****
>
> ** **
>
> *From:* loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
> *On Behalf Of *Adrian Flynn
> *Sent:* Tuesday, May 14, 2013 4:08 PM
> *To:* loopantennas@yahoogroups.com
> *Subject:* Re: [loopantennas] Low impedance twin-lead****
>

> ** **
>
> ****
>
> Yep,****
>
> Back in the day we twisted 300 ohm twin lead at 2 twists per foot to
> reduce noise and image pick up, course this was 55 to 60 years ago and YMMV.
> ****
>
> We twisted long run speaker and unshielded cables on PA systems to help
> keep those rotten CB'ers out.****
>
> 73****
>
> Adrian KF7DYU****
>
> ** **
>
> ** **
>
> On Tue, May 14, 2013 at 6:57 PM, Brian Burns <brian@lessonsinlutherie.com>
> wrote:****
>
> ****
>
> Hello Rick,****
>
> ****
>
> I found an on-line calculator for twisted pair parameters:****
>
> ****
>
> http://www.eeweb.com/toolbox/twisted-pair****
>
> ****
>
> ~ It is easy to get CAT-5 cable, which has 100 ohm twisted pairs,****
>
>
> and connect them in parallel to get 50, 33.3, or 25 ohms.
> It has low loss polyethylene dielectric, which makes it
> better than vinyl zipcord, especially as the frequency
> goes up. It is difficult to get much less than 50 ohms in
> a single twisted pair, even if you make your own out of
> thick wire with thin teflon insulation.****
>
> ****
>

> The impedances that I would be looking for are 72 ohms for a dipole and
> 100 ohms for a loop, so those should be practical values to come up with
> using available wire. I’ll run some numbers through the on-line calculator
> when I get a chance.****
>
> ****
>
> I’m also curious about the supposedly low noise pickup by twisted pair for
> receiving applications. Anybody have any experience along these lines?****
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> ****
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> Cheers,****
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> ****
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> Brian****
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> ** **
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9902. RE: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 15:18:13 UTC
From: Brian Burns
Topic: 9895 Message: 9902
Attachments: 1 described; binary payloads are missing from this source WARC

Hello again Jack,

Well, the advice that I was being too picky about trying to match the transmission line to the antenna had mostly to do with low loss transmission lines like 600 ohm open wire line. I think that we all know that for all its virtues, coax at high SWR's can be significantly lossy, especially for long runs. But for me there is something aesthetic about matching impedances well. And the simplicity of twisted pair, and the possibility of making the stuff myself, really appeals.

To try to get at the principle of the thing on the other forum, I used a rather absurd example. I said imagine that I'm a QRP nut case looking for a new challenge. I've decided that I want to be the first ham to get Worked All States using my garage door opener. I need to get every microwatt from this transmitter delivered to the antenna. Now I'm really concerned about accurately matching the transmission line to the antenna as well as matching the transmitter to the transmission line, right? But nobody there seemed to be much amused, or wanted to think about it.

My principle in my work is to measure things as accurately as possible-you can always dial back from that if it's not going to make enough difference to make a difference

Cheers,

Brian

See my website: www.lessonsinlutherie.com

It is possible to operate a transmission line with an intentional mismatch at the antenna.

The consequence of the mismatch is to increase the transmission line loss and peak voltage. If the transmission line is short, then the increased loss and higher peak voltage may be of little to no concern. Or, if the transmission line is very low loss, increased losses may not be important. The classic example is open wire line, spaced with ceramic or the like spreaders.

If you are using coaxial cable, then greater attention needs to be paid to the increased loss potential from a mismatch. In some cases it won't matter and in others it may be undesirable, depending on the degree of the mismatch, cable length, cable type, operating power and the like.

So if you were told that matching the antenna to the transmission line is not important, you were given greatly simplified information. Perhaps OK as

a 0th order approximation, but not much more than that.

Jack K8ZOA

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9903. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 15:59:39 UTC
From: Andy
Topic: 9895 Message: 9903

Matching impedances everywhere can help for a couple of reasons. One, for a given medium, the lower the SWR on that medium, the lower the loss. But be careful about that one, because if you change the medium (say by going from a mostly air dielectric to polyethylene or nylon), the losses change. And two, by matching impedances, you get better control over the final impedance your rig needs to drive.

Let's use an example. Say you have a 1-wavelength loop, and that your t-line is 3/4 of a wavelength long. The loop's feedpoint impedance on its fundamental resonance is somewhere near 100 ohms. Now let's say you feed it with 600 ohm balanced line. Sure the line losses don't matter (compared to coax) even with the 6:1 SWR on the line because it is low loss. But that length will transform the impedance, by going one and a half times around the Smith chart, to around 3600 ohms at the shack end. Either your rig needs to drive a 3600 ohm load, or a combination of antenna tuner and balun needs to bring 3600 ohms balanced down to 50 ohms unbalanced.

So by using 100 ohm balanced line, you end up with a terminal impedance that stays at 100 ohms at the shack end, which is easier to match. By being easier to match, it might also mean lower losses in your antenna tuner.

But on the other hand, the loss in your balanced line might be higher, because much of the medium is now plastic rather than air. It's just like the problem of using coax, maybe even worse.

And you might not want to use the loop on other bands with that balanced line, where the SWR on the line goes up, and with it, the loss. I'm not saying it is worse than the 600 ohm open line case, just saying it isn't a low-loss line simply because it is twinlead instead of coax.

So there are trade-offs no matter how you do it.

Andy

9904. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 16:01:45 UTC
From: John Popelish
Topic: 9895 Message: 9904
Attachments: 1 described; binary payloads are missing from this source WARC

Another possibility for balanced, low impedance cable, is Cat-5 Ethernet cable. Each pair has an impedance of about 100 ohms, and if you parallel all 4 pairs the total impedance is a bit less than 25 ohms. The insulation on those wires has pretty low loss up to 100MHz and the 4 parallel conductors have a lot of surface area, for lower RF resistance.

--
Regards,

John Popelish

On Wed, May 15, 2013 at 11:18 AM, Brian Burns
<brian@lessonsinlutherie.com>wrote:

>
>
> Hello again Jack,****
>
> ** **
>
> Well, the advice that I was being too picky about trying to match the
> transmission line to the antenna had mostly to do with low loss
> transmission lines like 600 ohm open wire line. I think that we all know
> that for all its virtues, coax at high SWR’s can be significantly lossy,
> especially for long runs. But for me there is something aesthetic about
> matching impedances well. And the simplicity of twisted pair, and the
> possibility of making the stuff myself, really appeals.****
>
> ** **
>
> To try to get at the principle of the thing on the other forum, I used a
> rather absurd example. I said imagine that I’m a QRP nut case looking for a
> new challenge. I’ve decided that I want to be the first ham to get Worked
> All States using my garage door opener. I need to get every microwatt from
> this transmitter delivered to the antenna. Now I’m really concerned about
> accurately matching the transmission line to the antenna as well as
> matching the transmitter to the transmission line, right? But nobody there
> seemed to be much amused, or wanted to think about it. ****
>
> ** **
>
> My principle in my work is to measure things as accurately as possible—you
> can always dial back from that if it’s not going to make enough difference
> to make a difference ****
>

> ** **
>
> Cheers,****
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> ** **
>
> Brian****
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> ** **
>
> ** **
>
> See my website: www.lessonsinlutherie.com****
>
> ** **
>
> ** **
>
> ** **
>
> It is possible to operate a transmission line with an intentional mismatch
> at the antenna.
>
> The consequence of the mismatch is to increase the transmission line loss
> and peak voltage. If the transmission line is short, then the increased
> loss and higher peak voltage may be of little to no concern. Or, if the
> transmission line is very low loss, increased losses may not be important.
> The classic example is open wire line, spaced with ceramic or the like
> spreaders.
>
> If you are using coaxial cable, then greater attention needs to be paid to
> the increased loss potential from a mismatch. In some cases it won't matter
> and in others it may be undesirable, depending on the degree of the
> mismatch, cable length, cable type, operating power and the like.
>
> So if you were told that matching the antenna to the transmission line is
> not important, you were given greatly simplified information. Perhaps OK as
> a 0th order approximation, but not much more than that.
>
> Jack K8ZOA****
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9905. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 18:20:35 UTC
From: Rick Karlquist
Topic: 9895 Message: 9905

John Popelish wrote:
> Another possibility for balanced, low impedance cable, is Cat-5 Ethernet
> cable. Each pair has an impedance of about 100 ohms, and if you parallel
> all 4 pairs the total impedance is a bit less than 25 ohms. The
> insulation

I posted this same info a few days ago. Maybe my posts
are not showing up.

> on those wires has pretty low loss up to 100MHz and the 4 parallel
> conductors have a lot of surface area, for lower RF resistance.
>
> John Popelish
>

This is a common misconception. The loss of CAT 5 twisted pair
is a few dB per 100 feet at 10 MHz IIRC from when I measured it.
Paralleling multiple twisted pairs does not change the loss at
all, even though there is more copper area. The reason why it
doesn't change the loss is that the increase in current due to
the lower Zo exactly cancels out the effect of the lowered resistance.

Rick N6RK

9906. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 18:54:00 UTC
From: John Popelish
Topic: 9895 Message: 9906

Sorry, If I missed your earlier post. I am away from home and trying to keep up with a web email reader.

I did not mean to imply that the loss would be lower for paralleled pairs than it would be for a single pair, if each were matched to a load. I was thinking of the earlier suggestion to twist a pair of 22 AWG enameled wires together, to make a low impedance line. I think the loss would be lower for paralleled pairs in CAT-5 than for that twisted pair (again, for a load matched to the line). But, I admit that I have not performed the measurement.

--
Regards,

John Popelish

On Wed, May 15, 2013 at 2:20 PM, Rick Karlquist <richard@...>wrote:

>
> I posted this same info a few days ago. Maybe my posts
> are not showing up.
>
> This is a common misconception. The loss of CAT 5 twisted pair
> is a few dB per 100 feet at 10 MHz IIRC from when I measured it.
> Paralleling multiple twisted pairs does not change the loss at
> all, even though there is more copper area. The reason why it
> doesn't change the loss is that the increase in current due to
> the lower Zo exactly cancels out the effect of the lowered resistance.
>
> Rick N6RK
>

9907. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 19:17:16 UTC
From: Richard (Rick) Karlquist
Topic: 9895 Message: 9907

On 5/15/2013 11:54 AM, John Popelish wrote:
>> I did not mean to imply that the loss would be lower for paralleled
> pairs than it would be for a single pair, if each were matched to a
> load. I was thinking of the earlier suggestion to twist a pair of 22
> AWG enameled wires together, to make a low impedance line. I think the
> loss would be lower for paralleled pairs in CAT-5 than for that twisted
> pair (again, for a load matched to the line). But, I admit that I have
> not performed the measurement.
>
> John Popelish

Yes, you are right that the loss would be lower with parallel CAT 5.
However, 22 AWG enameled twisted pair would not realize an impedance as
low as 25 ohms in the first place. I don't know any way to get 25
ohms with any twisted pair. If someone can tell me how to do that,
I would be interested.

Rick N6RK

9908. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 19:52:34 UTC
From: Jack Smith
Topic: 9895 Message: 9908

As far as I can determine, Lefferson's 1971 paper on twisted wire transmission lines formed from magnet wire is primary source document. One of his concluding paragraphs states that the range of feasible line impedances ranges from 10 to 60 ohms for a single twisted pair.

However, from a quick review of his paper - and it really needs much more than a quick scan - no. 21 AWG twisted with a pitch angle of 45 degrees is around 25 ohms Zo. However, he also notes that 45 degrees is about the limiting factor for pitch angle, based on the mechanical strength of copper.

Jack

On 5/15/2013 3:17 PM, Richard (Rick) Karlquist wrote:
>
>
>
> On 5/15/2013 11:54 AM, John Popelish wrote:
> >> I did not mean to imply that the loss would be lower for paralleled
> > pairs than it would be for a single pair, if each were matched to a
> > load. I was thinking of the earlier suggestion to twist a pair of 22
> > AWG enameled wires together, to make a low impedance line. I think the
> > loss would be lower for paralleled pairs in CAT-5 than for that twisted
> > pair (again, for a load matched to the line). But, I admit that I have
> > not performed the measurement.
> >
> > John Popelish
>
> Yes, you are right that the loss would be lower with parallel CAT 5.
> However, 22 AWG enameled twisted pair would not realize an impedance as
> low as 25 ohms in the first place. I don't know any way to get 25
> ohms with any twisted pair. If someone can tell me how to do that,
> I would be interested.
>
> Rick N6RK
>
>

9909. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-15 20:39:31 UTC
From: Andy
Topic: 9895 Message: 9909

> ... I don't know any way to get 25
> ohms with any twisted pair. If someone can tell me how to do that,
> I would be interested.

Somewhere, in the last year, I came across a webpage with good information about low impedance twisted pairs or parallel wires.

IIRC, it mentioned the previously-available low impedance ribbon cable, which has become hard to obtain.

He then performed a series of experiments, making his own lines out of wire. As I recall, he found it difficult if not impossible to get below 100 ohms by twisting ordinary insulated wire, because the insulation thickness was the limiting factor. It would require very fat wire with thin insulation, and even then, you get into some serious diminishing returns because the wire is round. (He didn't consider magnet wire.) He was able to achieve close to 50 ohms (or maybe he was aiming for 72 ohms, the theoretical feedpoint impedance of a resonant dipole) only by parallelling one insulated wire with one bare copper wire. It was not very practical, but it worked.

Andy

9910. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 00:21:01 UTC
From: Richard (Rick) Karlquist
Topic: 9895 Message: 9910

On 5/15/2013 1:39 PM, Andy wrote:

> IIRC, it mentioned the previously-available low impedance ribbon
> cable, which has become hard to obtain.
>

Can you give me a reference on that cable, even if it is hard to obtain?

Thanks.

Rick N6RK

9911. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 00:22:08 UTC
From: Richard (Rick) Karlquist
Topic: 9895 Message: 9911

On 5/15/2013 12:52 PM, Jack Smith wrote:
> As far as I can determine, Lefferson's 1971 paper on twisted wire

Can you give us a citation on that paper? Thanks.

Rick N6RK

9912. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 00:54:53 UTC
From: Jack Smith
Topic: 9895 Message: 9912

P. Lefferson, Twisted Magnet Wire Transmission Line, IEEE Transactions on Parts, Hybrids and Packaging, Vol. PHP-7, No. 4, December 1971, pp 148-154. There's also a correction at page 67 in a subsequent issue, but my copy doesn't have the correction citation, just the correction details.

Peter Lefferson is (or was, not sure if he's still alive) a ham, by the way.

Jack K8ZOA

On 5/15/2013 8:22 PM, Richard (Rick) Karlquist wrote:
>
>
> On 5/15/2013 12:52 PM, Jack Smith wrote:
>> As far as I can determine, Lefferson's 1971 paper on twisted wire
>
> Can you give us a citation on that paper? Thanks.
>
> Rick N6RK
>

9913. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 03:49:16 UTC
From: Rick Karlquist
Topic: 9895 Message: 9913

Jack Smith wrote:
> P. Lefferson, Twisted Magnet Wire Transmission Line, IEEE Transactions
> on Parts, Hybrids and Packaging, Vol. PHP-7, No. 4, December 1971, pp
> 148-154. There's also a correction at page 67 in a subsequent issue, but
> my copy doesn't have the correction citation, just the correction details.

The correction page in on page 67 of Vol PHP-8, No. 2, 1972.

Rick N6RK

9914. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 04:43:03 UTC
From: Andy
Topic: 9895 Message: 9914

> Can you give me a reference on that cable, even if it is hard to obtain?

Wish I could. Can't find that webpage article right now. I'm fairly sure I took a snapshot of it so I probably have it on the other computer's disk.

Apparently Belden made a 72 or 75 ohm twinlead half a century ago, and Amphenol had one with a P/N of 214-023.

Andy

9915. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 05:03:22 UTC
From: Phil
Topic: 9895 Message: 9915

I don't have the info available, but many years ago there was also a shielded pair cable called (I believe) "Twinax". I seem to recall that it was 75 Ohms, and at least some of the military radios (I'm thinking either the R-390 or SP-600) had a special balanced input antenna connector just for that cable. That might be a viable alternative if you can find any. . .

Many years have gone by and my memory isn't what it once was.

--
73 de Phil, KO6BB
http://www.qsl.net/ko6bb/ (Web Page)

RADIOS:
Grundigs: S-350 (2006) & G6 (2011).
Icom: R-75 Receiver with 250Hz CW Filter.
Icom: IC-735 Transceiver w 250 HZ CW filter (circa ~1990).
Radio Shack: DX-380 digital portable (circa 1990).
Zenith: Royal-7000 Transoceanic (circa 1969).

Decoder Software: Gray-matter between two Mark 1 earholes.

ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-949E HF Tuner
Homebrew 6 Hz Audio Filter.

ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
Active Whip at 36 Feet AGL for LF/MW.
4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF

Merced, Central California, 37, 18, 37N 120, 30, 6W CM97rh

On 5/16/2013 4:43 AM, Andy wrote:
>> Can you give me a reference on that cable, even if it is hard to obtain?
> Wish I could. Can't find that webpage article right now. I'm fairly
> sure I took a snapshot of it so I probably have it on the other
> computer's disk.
>
> Apparently Belden made a 72 or 75 ohm twinlead half a century ago, and
> Amphenol had one with a P/N of 214-023.
>
> Andy
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links

>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
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9916. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 05:32:29 UTC
From: Andy
Topic: 9895 Message: 9916

I am not sure that CAT-5 would be the best thing to use at RF. As one who has probed 100 Mbit Ethernet, I can tell you that the received waveform is severely attenuated and looks nothing like the transmitted waveform. All of the faster Ethernet speeds rely heavily on equalization to compensate for the cable rolloff.

Looking at some CAT-5 cable specs, I note that the DC resistance is on the order of 0.2 ohm per meter (not surprising for 24 AWG), and there is something about a 57 kHz corner frequency, perhaps either the -3 dB point or the skin depth frequency. That's kHz, not MHz.

Don't confuse CAT-5's "100 MHz" spec as an indication that it is flat or low-loss to 100 MHz. It definitely is not. It probably means the characteristics are repeatable to 100 MHz and that the loss at 100 MHz is workable given the current state-of-the-art in on-chip active equalization.

For experimental purposes and for fun, short lengths of CAT-5 might work; but I would not expect it to do well. And it can't handle much power; probably not a lot more than 10 W safely, per pair.

Andy

9917. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 05:33:45 UTC
From: kevin asato
Topic: 9895 Message: 9917

Twinax was typically used in Token Ring networks.

73,
kevin
kc6pob

From: Phil <ko6bb1@...>
To: loopantennas@yahoogroups.com
Sent: Wednesday, May 15, 2013 10:03 PM
Subject: Re: [loopantennas] Low impedance twin-lead

I don't have the info available, but many years ago there was also a shielded pair cable called (I believe) "Twinax". I seem to recall that it was 75 Ohms, and at least some of the military radios (I'm thinking either the R-390 or SP-600) had a special balanced input antenna connector just for that cable. That might be a viable alternative if you can find any. . .

Many years have gone by and my memory isn't what it once was.

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73 de Phil, KO6BB
http://www.qsl.net/ko6bb/ (Web Page)

RADIOS:
Grundigs: S-350 (2006) & G6 (2011).
Icom: R-75 Receiver with 250Hz CW Filter.
Icom: IC-735 Transceiver w 250 HZ CW filter (circa ~1990).
Radio Shack: DX-380 digital portable (circa 1990).
Zenith: Royal-7000 Transoceanic (circa 1969).

Decoder Software: Gray-matter between two Mark 1 earholes.

ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-949E HF Tuner
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ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
Active Whip at 36 Feet AGL for LF/MW.
4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF

Merced, Central California, 37, 18, 37N 120, 30, 6W CM97rh

On 5/16/2013 4:43 AM, Andy wrote:
>> Can you give me a reference on that cable, even if it is hard to obtain?
> Wish I could. Can't find that webpage article right now. I'm fairly
> sure I took a snapshot of it so I probably have it on the other
> computer's disk.

>
> Apparently Belden made a 72 or 75 ohm twinlead half a century ago, and
> Amphenol had one with a P/N of 214-023.
>
> Andy
>
>
> ---
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>
>

9918. Re: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 06:14:56 UTC
From: Andy
Topic: 9830 Message: 9918

The JK (or JKT?) indoor phone wire I have seen, is four wires with a gentle twist of the whole bunch. Taking a cross section, the four wires are in a square. The "pairs", if you will, are opposite corners of the square. Thus, if the signals on both pairs are differential, crosstalk is minimized because even though each pair is fully immersed within the field of the other pair, it is in such a way that the differential components cancel.

The use of opposite corners to form a pair, raises the characteristic impedance from what it would be if they had twisted the pairs.

Since this stuff was intended for voice use only, they might have never characterized its impedance Zo. At audio frequencies, twisted pair copper wires do not have a constant characteristic impedance. It typically increases by more than an order of magnitude at audio frequencies, compared to higher frequencies where it finally levels off.

There is some mythology that telco uses Zo = 600 ohms for all its wire pairs. I have seen references that argue why this is not true. In the very very old days telco used open wire lines which might have been in that range, or greater. Twisted wire lines in cable bundles, which make up the majority of telco lines, were closer to 100 ohms Zo, but did not reach that until well above audio frequencies.

Andy

9919. Re: Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 10:25:11 UTC
From: Steve
Topic: 9895 Message: 9919

When I'm winding 12.5/50 Ohm 1:4 current baluns and need a winding Zo of 25 Ohms, I use a couple of lengths of RG316 wired in parallel (total power handling 2.5kW at 30MHz). An example at the bottom of this page:
http://www.karinya.net/g3txq/cobweb/

Strap them in series instead of parallel and you have a Zo of 100 Ohms for a 50/200 Ohm 4:1 balun.

I find that approach more straightforward than trying to fabricate a "pair" with the required 25 Ohm impedance and power handling.

Steve G3TXQ

9920. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 12:30:17 UTC
From: Alex VE3NEA
Topic: 9895 Message: 9920

According to the data published here (http://www.cerrowire.com/consumer-rg6u-coax), CAT-5 has lower insertion loss (attenuation) than inexpensive coax. For a 100' run of cable at 55 MHz, the published figures are:

RG-59 6.73 dB
RG-6U 5.25 dB
CAT-5 4.34 (interpolated).

The results of the actual measurements (http://www.ieee802.org/3/10GBT/public/mar03/cohen_1_0303.pdf) indicate that the nominal parameters of CAT-5 are worst case, the typical values are even better.

73 Alex VE3NEA

-----Original Message-----
From: Andy
Sent: Thursday, May 16, 2013 1:32 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Low impedance twin-lead

I am not sure that CAT-5 would be the best thing to use at RF. As one who has probed 100 Mbit Ethernet, I can tell you that the received waveform is severely attenuated and looks nothing like the transmitted waveform. All of the faster Ethernet speeds rely heavily on equalization to compensate for the cable rolloff.

Looking at some CAT-5 cable specs, I note that the DC resistance is on the order of 0.2 ohm per meter (not surprising for 24 AWG), and there is something about a 57 kHz corner frequency, perhaps either the -3 dB point or the skin depth frequency. That's kHz, not MHz.

Don't confuse CAT-5's "100 MHz" spec as an indication that it is flat or low-loss to 100 MHz. It definitely is not. It probably means the characteristics are repeatable to 100 MHz and that the loss at 100 MHz is workable given the current state-of-the-art in on-chip active equalization.

For experimental purposes and for fun, short lengths of CAT-5 might work; but I would not expect it to do well. And it can't handle much power; probably not a lot more than 10 W safely, per pair.

Andy

9921. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 16:56:22 UTC
From: Rick Karlquist
Topic: 9895 Message: 9921

Alex VE3NEA wrote:
> According to the data published here
> (http://www.cerrowire.com/consumer-rg6u-coax), CAT-5 has lower insertion
> loss
> (attenuation) than inexpensive coax. For a 100' run of cable at 55 MHz,
> the
> published figures are:
>
> RG-59 6.73 dB
> RG-6U 5.25 dB
> CAT-5 4.34 (interpolated).

I measured 2.3 dB per 100 ft. at 10 MHz. This is slightly higher
than the number above, if adjusted for SQRT(frequency).

The loss is very close to the theoretical open wire line loss
using the usual formula, at least at these "low" frequencies
where the effect of the wire twist is negligible.

Rick N6RK

9922. Re: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 17:00:38 UTC
From: Rick Karlquist
Topic: 9830 Message: 9922

Andy wrote:

> The use of opposite corners to form a pair, raises the characteristic
> impedance from what it would be if they had twisted the pairs.

If you wire the cable as the traditional "4-wire line" then it turns out that the characteristic impedance is 70.7% of the impedance of an individual side by side pair. 4 wire line ties together opposite wires and then drives the tied pairs against each other. This is normally described in the context of open wire line with circular disk spacers, but the concept should be extensible to quadrifilar twisted line.

Rick N6RK

9923. Re: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 17:33:16 UTC
From: John Popelish
Topic: 9830 Message: 9923

On Thu, May 16, 2013 at 1:00 PM, Rick Karlquist <richard@...>wrote:

> Andy wrote:
>
> If you wire the cable as the traditional "4-wire line" then it turns
> out that the characteristic impedance is 70.7% of the impedance of
> an individual side by side pair. 4 wire line ties together opposite
> wires and then drives the tied pairs against each other. This is
> normally described in the context of open wire line with circular
> disk spacers, but the concept should be extensible to quadrifilar
> twisted line.
>
> Rick N6RK
>

Have you a reference for this 4 wire transmission line configuration and
impedance?
I can't find one. All I find is references to star-quad audio cable, that
is intended to be used this way, for low impedance mics. And it is
shielded.

--
Regards,

John Popelish

9924. Re: Variable Dielectric Capacitor?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 12:45:09 UTC
From: martin.sivak
Topic: 1388 Message: 9924

Hi,

did anybody actually tried this back in 2005 or later? Are there any results? This thread is pretty old and seems to lack any conclusion :)

I was planning to try to do exactly this (variable dielectric capacitor) and found this thread while doing my research.

>
> it occurred to me that single sided copper clad board might be suitable for
> the capacitor plates as long as the substrate material was not interior to
> the capacitor plates and subject to the fields. i don't think it should
> contribute to loss in that postion.

Exactly my thinking, it might make one very cheap variable capacitor that can withstand both high voltage and high current.

My plan is to take two copper clad boards, separate them using plastic spacers (4 or 5mm) and slide polystyrene board between the copper planes.

According to the resources (links below) I found online, polystyrene has tangent loss of about 2 - 5 x 10^-4 and relative permitivity of about 2.5. That is actually not bad at all as Mica has "similar" loss properties.

http://www.rfcafe.com/references/electrical/dielectric-constants-strengths.htm
http://www.kayelaby.npl.co.uk/general_physics/2_6/2_6_5.html
http://www.eccosorb.eu/sites/default/files/files/dielectric-chart.pdf

Polystyrene also supposedly has much higher dielectric strength (197kV/cm) than air (10-30kV/cm) so arcing does not have to be an issue (especially for QRP or low power) as well.

73!

Martin OK7MS

9925. 50MHz reception using a modified Wellbrook 1530 Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 14:49:59 UTC
From: Philip
Topic: 9925 Message: 9925

Hello all,

I have been a very keen VHF DX chaser for over 20 years, until a house move in 2009 stopped me having beam antennas.

When I ordered my Wellbrook ALA-1530 magnetic loop antenna I had enquired first about the 1530+ model which appeared to cover up to 100 MHz.

I found the 1530+ was no longer in production, but that it was possible for me to order a 1530 and choose not to have the VHF attenuators fitted, with a slight loss in HF performance on 18 & 21 MHz.

I was very pleased with my Wellbrook 1530 loop on HF over the past few months and now in May 2013 I have been able to compare it with my other antennas on the 50 MHz band. The results have been quite surprising!

My modified Wellbrook 1530 loop had consistantly outperformed both my 50 MHz vertical antenna and my 280' horizontal dipole when listening to 50 MHz signals via Sporadic-E. Signals are very much stronger on my loop from all over Europe and sometimes I cannot hear them at all on my other antennas which I have used for 50 MHz reception in recent years.

I am going to experiment with the loop for reception of Band 1 TV carriers via Meteor Scatter next.

My loop is at ground level too and no longer on a small mast.

I just wanted to share my results with you in case it is of interest.

73 de Philip G0ISW

http://www.qsl.net/g0isw

9926. Re: [loopantennas] Low impedance twin-lead

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 19:15:47 UTC
From: Adrian Flynn
Topic: 9895 Message: 9926

Also add the E.H. Scott "RCH" Receiver to those that used "Twinax"
First radio I ever owned.
73
Adrian KF7DYU
On Thu, May 16, 2013 at 1:03 AM, Phil <ko6bb1@...> wrote:

> **
>
>
> I don't have the info available, but many years ago there was also a
> shielded pair cable called (I believe) "Twinax". I seem to recall that
> it was 75 Ohms, and at least some of the military radios (I'm thinking
> either the R-390 or SP-600) had a special balanced input antenna
> connector just for that cable. That might be a viable alternative if
> you can find any. . .
>
> Many years have gone by and my memory isn't what it once was.
>
> --
> 73 de Phil, KO6BB
> http://www.qsl.net/ko6bb/ (Web Page)
>
> RADIOS:
> Grundigs: S-350 (2006) & G6 (2011).
> Icom: R-75 Receiver with 250Hz CW Filter.
> Icom: IC-735 Transceiver w 250 HZ CW filter (circa ~1990).
> Radio Shack: DX-380 digital portable (circa 1990).
> Zenith: Royal-7000 Transoceanic (circa 1969).
>
> Decoder Software: Gray-matter between two Mark 1 earholes.
>
> ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-949E HF Tuner
> Homebrew 6 Hz Audio Filter.
>
> ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
> Active Whip at 36 Feet AGL for LF/MW.
> 4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF
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> Merced, Central California, 37, 18, 37N 120, 30, 6W CM97rh
>
>
> On 5/16/2013 4:43 AM, Andy wrote:
> >> Can you give me a reference on that cable, even if it is hard to obtain?
> > > Wish I could. Can't find that webpage article right now. I'm fairly
> > > sure I took a snapshot of it so I probably have it on the other

> > computer's disk.
> >
> > Apparently Belden made a 72 or 75 ohm twinlead half a century ago, and
> > Amphenol had one with a P/N of 214-023.
> >
> > Andy
> >
> >
> > ------------------------------------
>
> >
> > If you've got links, post them in the Links section!
> > http://groups.yahoo.com/group/loopantennas/links
> >
> > Post files here. If the file comes from a website, please put it in the
> Links rather than uploading the file.
> > http://groups.yahoo.com/group/loopantennas/files
> >
> > You can now view images at higher resolution in Photos. Upload JPG and
> GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> > http://ph.groups.yahoo.com/group/loopantennas/photos
> >
> > And please trim all this when replying!Yahoo! Groups Links
> >
> >
> >
> >
>
>
>

9927. Re: [loopantennas] How about phone cable?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 20:45:40 UTC
From: Richard (Rick) Karlquist
Topic: 9830 Message: 9927

On 5/16/2013 10:33 AM, John Popelish wrote:
>
>

>
>
> Have you a reference for this 4 wire transmission line configuration and
> impedance?
> I can't find one. All I find is references to star-quad audio cable,
> that is intended to be used this way, for low impedance mics. And it is
> shielded.

See Edmund Laport's "Radio Antenna Engineering" now free on the web at:

http://www.lulu.com/product/ebook/ra...shelf/center/2

Rick N6RK

9928. Re: [loopantennas] 50MHz reception using a modified Wellbrook 1530 Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-16 21:17:51 UTC
From: Andrew Ikin
Topic: 9925 Message: 9928

Phil,

All ALA1530 loops built before 2010 would have a similar VHF responce as mentioned in your post.

The reason for the inclusion of the VHF filter was due to some North American users being concerned that the loop had too much gain in the FM band. The only satisfactory way I could reduce the VHF gain without degrading the upper HF performance was to move the loop/amplifier resonance from approx. 40MHz down to 14MHz by loading the loop with some capacitance. This also had the added benefit of increasing the amplifier input z above 14MHz and thus improve the loop/amplifier matching, to give a 5dB gain increase. Hence, the amplifier would provide a reasonable loop impedance track over a 1:20 ratio. Previously this had been approx. 1:12 ratio. The loop and amplifier input z is about 10-15 Ohms at 1MHz. With the present amplifier design, the transistor Miller capacitance limits the HF gain and input z. One option would be to use a cascode amplifier, this can provide 1:30 impedance tracking ratio. At the moment it is too early to say whether this option is worthwhile. However it may improve the lower VHF gain with loop loading caps removed!!!

73

Andrew Ikin

9929. RE: [loopantennas] Re: Variable Dielectric Capacitor?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-17 02:15:49 UTC
From: William Young
Topic: 1388 Message: 9929

No, I haven't tried a variable dielectric capacitor, but I have tried what I called a "floating rotor" variable capacitor with a metal plate rotating into and out of the space between two fixed capacitor plates. The resulting change in capacitance for 180 degrees of rotation is small but very useful for fine tuning a receiver. See QEX May/June 2002, page 31. Bill Young WD5HOH

To: loopantennas@yahoogroups.com
From: mars@...
Date: Thu, 16 May 2013 12:45:09 +0000
Subject: [loopantennas] Re: Variable Dielectric Capacitor?

Hi,

did anybody actually tried this back in 2005 or later? Are there any results? This thread is pretty old and seems to lack any conclusion :)

I was planning to try to do exactly this (variable dielectric capacitor) and found this thread while doing my research.

>

> it occurred to me that single sided copper clad board might be suitable for

> the capacitor plates as long as the substrate material was not interior to

> the capacitor plates and subject to the fields. i don't think it should

> contribute to loss in that postion.

Exactly my thinking, it might make one very cheap variable capacitor that can withstand both high voltage and high current.

My plan is to take two copper clad boards, separate them using plastic spacers (4 or 5mm) and slide polystyrene board between the copper planes.

According to the resources (links below) I found online, polystyrene has tangent loss of about 2 - 5 x 10^-4 and relative permitivity of about 2.5. That is actually not bad at all as Mica has "similar" loss properties.

http://www.rfcafe.com/references/electrical/dielectric-constants-strengths.htm

http://www.kayelaby.npl.co.uk/general_physics/2_6/2_6_5.html

http://www.eccosorb.eu/sites/default/files/files/dielectric-chart.pdf

Polystyrene also supposedly has much higher dielectric strength (197kV/cm) than air (10-30kV/cm) so arcing does not have to be an issue (especially for QRP or low power) as well.

73!

Martin OK7MS

9930. Re: [loopantennas] 50MHz reception using a modified Wellbrook 1530 Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-17 06:16:56 UTC
From: Richard (Rick) Karlquist
Topic: 9925 Message: 9930

On 5/16/2013 2:17 PM, Andrew Ikin wrote:
>
> input z above 14MHz and thus improve the loop/amplifier matching, to
> give a 5dB gain increase. Hence, the amplifier would provide a
> reasonable loop impedance track over a 1:20 ratio. Previously this had
> been approx. 1:12 ratio. The loop and amplifier input z is about 10-15
> Ohms at 1MHz. With the present amplifier design, the transistor Miller
> capacitance limits the HF gain and input z. One option would be to use a
> cascode amplifier, this can provide 1:30 impedance tracking ratio. At
> the moment it is too early to say whether this option is worthwhile.
> However it may improve the lower VHF gain with loop loading caps removed!!!
>
> 73
>
> Andrew Ikin

Are you saying that the amplifier input impedance is a positive reactance that tracks the positive reactance of the loop? Or is it possibly a resistive input impedance that tracks the magnitude of the loop reactance? Is the amplifier connected directly to the loop feedpoint, or is there intervening coaxial line?

73

Rick N6RK

9931. Re: [loopantennas] Re: Variable Dielectric Capacitor?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-17 07:03:18 UTC
From: kevin asato
Topic: 1388 Message: 9931

Should work. By theory a capacitor is nothing more than 2 opposite potential surfaces separated by a dielectric (air, fiberglass, some sort of plastic, etc). Using square plates will produce very non linear capacitance values as capacitance is affected by the area of the opposing plates. PITA to try to calculate, too! One thing to be aware with what you are planning is that you may have to account for air acting as a dielectric when you insert and remove the polystyrene between the two plates. May not be a large contribution to the overall capacitance but needs to be looked at. Not trying to talk you out of trying this. Let us know how it turns out!

>My plan is to take two copper clad boards, separate them using plastic
spacers (4 or 5mm) and slide polystyrene board between the copper planes.

I took a basic electricity course seemingly eons ago where we took two sheets of aluminum foil and slightly larger pieces of wax paper. The wax paper was inserted between the foil and the 2nd sheet was laid on top of the foil of what would be the inner surface of the capacitor. The entire assembly was rolled/folded up into a tubular capacitor type form and jumper wires were connected, one to each sheet of foil. The capacitor was then connected to a low current assembly with a known value resistor and an NE-2 neon bulb. We could then see the neon bulb flash at a rate corresponding to the value of the capacitors made by the class. Since this class was geared towards elementary school children, we did not try to calculate/approximate the dielectric value of wax paper, though in retrospect, it would be a good exercise for high school physics.

73,
kevin
kc6pob

9932. Re: [loopantennas] 50MHz reception using a modified Wellbrook 1530 Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-17 15:51:52 UTC
From: Andrew Ikin
Topic: 9925 Message: 9932

Rick N6RK wrote on May 17.

Are you saying that the amplifier input impedance is a positive reactance that tracks the positive reactance of the loop? Or is it possibly a resistive input impedance that tracks the magnitude of the loop reactance? Is the amplifier connected directly to the loop feedpoint, or is there intervening coaxial line?

73

Rick N6RK

Rick, The amplifier input impedance is positive approx. +70 degrees over most design bandwidth and this tracks the loops rising positive reactance with frequency. The Amplifier connexion is directly to the loop.

If one looks the A F of the ALA1530 and a very low input z amplifier of Wellbrook LFL1010 using basically the same amplifier. The LFL1010 has a nearly constant A F of 15dB from 70kHz to 30MHz, whereas the A F of the ALA1530 at 70kHz is 21.0dB gradually rising to 0.5dB at 25MHz
On average the ALA1530 impedance tracking yields a 10dB increase in sensitivity from 500kHz to 30MHz.

Put it another way, very low input z amps. are okay from low sensitivity loops for say EMC work.

73

Andrew

P. S.

A F is the Antenna Factor in dB

Antenna Factor to receiver indication converts dBuV to dBuV/m

Receiver indication assumes the antenna driving into a 50 Ohm system.

For example, if the receiver indication at 300kHz was 90dBuV, the Field strength is 99dBuV/m. Hence, the A F would be 9dB

The lower the A.F. the more sensitive the antenna.

9933. Using CAT5

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-17 16:29:32 UTC
From: john
Topic: 9933 Message: 9933

Hi all. For those interested in the use of CAT5 cable, have a look at this site. http://www.lz1aq.signacor.com/

I have one of LZ1AQ'S loops here and it is now my most used recieving antenna. Highly recommended.

It is fed using 30m of CAT 5 with no problems. For outdoor use, CAT5 / 6 is available in forms suitable for this use - uses a rugged black external jacket rather than the flimsy blue stuff used for internal cable. The only issues may be sourcing it - try a wholesaler though buying a short length is probably hard to do as they usually sell by the drum. Another possible source is a data / comms installer who may be more likely to sell a short length especially if he has some scrap lengths tucked away. Otherwise just possibly spray paint the blue stuff some unobtrusive colour and accept that replacement will be needed every so often. Goodness knows, it is cheap enough!

Re using zip cord and the like: it is my choice on DXpeditions rather than hauling along bulky coax. For recieving purposes it works just fine with suitable baluns / matching transformers. Yes, we can get all academic and purist but it suffices well for my particular purposes.

Cheers, John

9934. Impedance matching

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-19 18:12:55 UTC
From: Brian Burns
Topic: 9934 Message: 9934

Hello All,

Boy, the more I learn the less I know when it comes to transmitters/antenna tuners/transmission lines/ and antennas.

Here is a link to Cecil's-W5DXP-site, and his explanation of the function of antenna tuner in an antenna system:

http://www.w5dxp.com/OWT1.htm

He is the guy with the switched in lengths of 450 ohm line as matching stubs, using knife switches, BTW. He really seems to know whereof he speaks, being a life-long EE and all, and antennas are his specialty.

I've read through the link above, and Cecil seems to be saying that the antenna and transmission line form a system, and the antenna tuner matches the whole system, transmission line and antenna both.

I think that Andy makes a good point that the closer that your transmission line matches your antenna, the less work the antenna tuner has to do, and perhaps its insertion loss is lower.

The search for the Truly all band antenna goes on!

Cheers,

Brian

Intelligence is common--wisdom is rare. Thomas Sowell is a wise man:

<http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1>
http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1

9935. Re: Impedance matching

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-19 18:39:19 UTC
From: Steve
Topic: 9934 Message: 9935

Brian,

Some further information on what a tuner does, here:
http://www.karinya.net/g3txq/tuner_match/

73,
Steve G3TXQ

--- In loopantennas@yahoogroups.com, "Brian Burns" <brian@...> wrote:
>
> Hello All,
>
>
>
> Boy, the more I learn the less I know when it comes to transmitters/antenna
> tuners/transmission lines/ and antennas.
>
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> line matches your antenna, the less work the antenna tuner has to do, and
> perhaps its insertion loss is lower.
>
>
>

> The search for the Truly all band antenna goes on!
>
>
>
> Cheers,
>
>
>
> Brian
>
>
>
>
>
> Intelligence is common--wisdom is rare. Thomas Sowell is a wise man:
>
>
>
> <http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1>
> http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1
>

9936. RE: [loopantennas] Re: Impedance matching

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-19 19:17:13 UTC
From: Brian Burns
Topic: 9934 Message: 9936
Attachments: 2 described; binary payloads are missing from this source WARC

Hello Steve,

Thanks for the link! There is lots of good stuff on that site, in addition
to the info on how tuners work.

Cheers,

Brian

Brian,

Some further information on what a tuner does, here:
http://www.karinya.net/g3txq/tuner_match/

73,
Steve G3TXQ

--- In loopantennas@yahoogroups.com <mailto:loopantennas%40yahoogroups.com>
, "Brian Burns" <brian@...> wrote:
>
> Hello All,
>
>
>
> Boy, the more I learn the less I know when it comes to
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>
>

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> I've read through the link above, and Cecil seems to be saying that the
> antenna and transmission line form a system, and the antenna tuner matches
> the whole system, transmission line and antenna both.
>
>
>
> I think that Andy makes a good point that the closer that your
transmission
> line matches your antenna, the less work the antenna tuner has to do, and
> perhaps its insertion loss is lower.
>
>
>
> The search for the Truly all band antenna goes on!
>
>
>
> Cheers,
>
>
>
> Brian
>
>
>
>
>
> Intelligence is common--wisdom is rare. Thomas Sowell is a wise man:
>
>
>
> <http://www.youtube.com/watch?v=5KHdhrNhh88
<http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1> &NR=1>
> http://www.youtube.com/watch?v=5KHdhrNhh88
<http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1> &NR=1
>

9937. question for MW loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-19 19:36:57 UTC
From: LIAGKAS ZAXARIAS
Topic: 9937 Message: 9937

Hello
I m thinking into making a MW loop using this box
http://www.ipernity.com/doc/zliangas/15104891
that has dimensions of

30 x 49.5 x 26cm height (5 cm for the handler)

How many turns do you think are necessary to resonate in the MW band?
I Need this information before i buy the necesary wire ...

A friend has made something similar using a box of 35x52 x 26 height using Ethernet cable with wire steps of 1 cm

zach

9938. Re: question for MW loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-19 21:47:55 UTC
From: riccardodematteis
Topic: 9937 Message: 9938

I believe it depends on the capacitor you have.
How about trying this calculator:
http://www.angelfire.com/mb/amandx/loop.html

--- In loopantennas@yahoogroups.com, LIAGKAS ZAXARIAS <greekdx@...> wrote:
>
> Hello
> I m thinking into making a MW loop using this box
> http://www.ipernity.com/doc/zliangas/15104891
> that has dimensions of
>
> 30 x 49.5 x 26cm height (5 cm for the handler)
>
> How many turns do you think are necessary to resonate in the MW band?
> I Need this information before i buy the necesary wire ...
>
> A friend has made something similar using a box of 35x52 x 26 height using Ethernet cable with wire steps of 1 cm
>
>
> zach
>

9939. RE: [loopantennas] Re: question for MW loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-21 08:02:30 UTC
From: LIANGAS ZACHARIAS
Topic: 9937 Message: 9939

Yes i just tested it and was a little garbled with his winding number> althouth as noticed he used 0.5 inch step , the default number shown in the calculator is 0.05
Does it mean that i have to use the 1/10 of the real spacing??

riccardodematteis <riccardodematteis@...> wrote:
> I believe it depends on the capacitor you have.
> How about trying this calculator:
> http://www.angelfire.com/mb/amandx/loop.html
>
>
> --- In loopantennas@yahoogroups.com, LIAGKAS ZAXARIAS <greekdx@...> wrote:
> >
> > Hello
> > I m thinking into making a MW loop using this box
> > http://www.ipernity.com/doc/zliangas/15104891
> > that has dimensions of
> >
> > 30 x 49.5 x 26cm height (5 cm for the handler)
> >
> > How many turns do you think are necessary to resonate in the MW band?
> > I Need this information before i buy the necesary wire ...
> >
> > A friend has made something similar using a box of 35x52 x 26 height using Ethernet cable with wire steps of 1 cm
> >
> >
> > zach
> >
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links

>
>
>
>

9940. Re: question for MW loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-21 08:49:10 UTC
From: riccardodematteis
Topic: 9937 Message: 9940

you don't have to stick to that spacing value
you have to play with capacitance and inductance
a big variable capacitor will help
http://makearadio.com/loops/

--- In loopantennas@yahoogroups.com, LIANGAS ZACHARIAS <greekdx@...> wrote:
>
>
> Yes i just tested it and was a little garbled with his winding number> althouth as noticed he used 0.5 inch step , the default number shown in the calculator is 0.05
> Does it mean that i have to use the 1/10 of the real spacing??
>
>
>
>
> riccardodematteis <riccardodematteis@...> wrote:
> > I believe it depends on the capacitor you have.
> > How about trying this calculator:
> > http://www.angelfire.com/mb/amandx/loop.html
> >
> >
> > --- In loopantennas@yahoogroups.com, LIAGKAS ZAXARIAS <greekdx@> wrote:
> > >
> > > Hello
> > > I m thinking into making a MW loop using this box
> > > http://www.ipernity.com/doc/zliangas/15104891
> > > that has dimensions of
> > >
> > > 30 x 49.5 x 26cm height (5 cm for the handler)
> > >
> > > How many turns do you think are necessary to resonate in the MW band?
> > > I Need this information before i buy the necesary wire ...
> > >
> > > A friend has made something similar using a box of 35x52 x 26 height using Ethernet cable with wire steps of 1 cm
> > >
> > >
> > > zach
> > >
> >
> >
> >
> > ------------------------------------
> >
> > If you've got links, post them in the Links section!

> > http://groups.yahoo.com/group/loopantennas/links
> >
> > Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> > http://groups.yahoo.com/group/loopantennas/files
> >
> > You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> > http://ph.groups.yahoo.com/group/loopantennas/photos
> >
> > And please trim all this when replying!Yahoo! Groups Links
> >
> >
> >
> >
>

9941. Re: question for MW loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-21 09:49:39 UTC
From: Zacharias
Topic: 9937 Message: 9941

OK thank you for the info

I have many spare capacitors ranging from 150 to 1500 pf!
The design of amandx reminds my big loop on
http://www.ipernity.com/doc/zliangas/13310480/in/album/282394
that is not easily transferable outside the house

--- In loopantennas@yahoogroups.com, "riccardodematteis" <riccardodematteis@...> wrote:
>
> you don't have to stick to that spacing value
> you have to play with capacitance and inductance
> a big variable capacitor will help
> http://makearadio.com/loops/
>
>
> --- In loopantennas@yahoogroups.com, LIANGAS ZACHARIAS <greekdx@> wrote:
> >
> >
> > Yes i just tested it and was a little garbled with his winding number> althouth as
noticed he used 0.5 inch step , the default number shown in the calculator is 0.05
> > Does it mean that i have to use the 1/10 of the real spacing??
> >
> >
> >
> >
> > riccardodematteis <riccardodematteis@> wrote:
> > > I believe it depends on the capacitor you have.
> > > How about trying this calculator:
> > > http://www.angelfire.com/mb/amandx/loop.html
> > >
> > >
> > > --- In loopantennas@yahoogroups.com, LIAGKAS ZAXARIAS <greekdx@> wrote:
> > > >
> > > > Hello
> > > > I m thinking into making a MW loop using this box
> > > > http://www.ipernity.com/doc/zliangas/15104891
> > > > that has dimensions of
> > > >
> > > > 30 x 49.5 x 26cm height (5 cm for the handler)
> > > >
> > > > How many turns do you think are necessary to resonate in the MW band?
> > > > I Need this information before i buy the necesary wire ...
> > > >
> > > > A friend has made something similar using a box of 35x52 x 26 height using Ethernet
cable with wire steps of 1 cm

> > > >
> > > >
> > > > zach
> > > >
> > >
> > >
> > >
> > > ----------
> > >
> > > If you've got links, post them in the Links section!
> > > http://groups.yahoo.com/group/loopantennas/links
> > >
> > > Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> > > http://groups.yahoo.com/group/loopantennas/files
> > >
> > > You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> > > http://ph.groups.yahoo.com/group/loopantennas/photos
> > >
> > > And please trim all this when replying!Yahoo! Groups Links
> > >
> > >
> > >
> > >
> >
>

9942. magnetic loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-21 15:43:20 UTC
From: RobertH
Topic: 9942 Message: 9942

Sometimes my local power line noise is about S8 or so on 80 and 160.
I am considering the purchase of one of these magnetic loop antennas for receiving.
Anyone have one of these ? How well does it perform ? One better than the other ?

Pixel Technologies RF PRO-1B
Wellbrooke Communications ALA 1530

Bob
K6UJ

9943. RE: [loopantennas] magnetic loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-22 09:55:11 UTC
From: Dominique Kremp
Topic: 9942 Message: 9943

Hi Bob,

I could compare both antennas side by side, trust me, the better one is the ALA1530.
Here is a link to a review of both of them. Very comprehensive and interesting. I confirm Guy Atkin's conclusions.
http://tinyurl.com/ogo25st
Like most Pixel users in Europe I sold on my RF-Pro-1B after one month use.
Furthermore WELLBROOK's boss Andy IKIN is very customers-friendly and provides help and advices at any time !
Hope it helps

Dominique
Normandy, France

PS: I don't have any connection to WELLBROOK !

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de RobertH
Envoyé : mardi 21 mai 2013 17:43
À : loopantennas@yahoogroups.com
Objet : [loopantennas] magnetic loops

Sometimes my local power line noise is about S8 or so on 80 and 160.
I am considering the purchase of one of these magnetic loop antennas for receiving.
Anyone have one of these ? How well does it perform ? One better than the other ?

Pixel Technologies RF PRO-1B
Wellbrooke Communications ALA 1530

Bob
K6UJ

If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
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You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!Yahoo! Groups Links

9944. RE: [loopantennas] magnetic loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-22 10:08:01 UTC
From: dx11
Topic: 9942 Message: 9944

You can find a comparison here:

http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf

As far I know the Pixel Pro-1B is nu much different from the Pro-1A.

Cor Beijersbergen

Anyone have one of these ? How well does it perform ? One better than the other ?

Pixel Technologies RF PRO-1B
Wellbrooke Communications ALA 1530

Bob
K6UJ

9945. Re: magnetic loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-22 11:08:11 UTC
From: John
Topic: 9942 Message: 9945

I've used a Pixel Tech PRO-1a for several years. It's mounted on a 5 ft mast section attached to my deck, placing the loop's center ~7.5 ft above the ground. I have the loop parallel to the house where it minimizes the powerline noise. That was to be a temporary mounting, but it works so well there, I left it. It is mechanically stout, having weathered a near-miss by the F3-F4 tornado of 1/27/12. My neighbors weren't so lucky. It did clean off the deck, however. I wish it had a 12V input for the power inserter - I could have listened during the power outages. They have one available now. I've had 145ft lw, TTFD, A-D Sloper, etc - the trees supporting the house end of the antennas had to be downed - too much storm damage. The PRO-1a is more quiet than even the TTFD - with similar signal levels from 2-18 MHz - the directional nature of the small loop makes a rotator helpful at MW and below. Great product - modular construction is a plus - as is the fact it was made in the USA. Check eHAM.com reviews for more ratings.

John

--- In loopantennas@yahoogroups.com, "dx11" <dx11@...> wrote:
>
> You can find a comparison here:
>
> http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf
>
> As far I know the Pixel Pro-1B is nu much different from the Pro-1A.
>
> Cor Beijersbergen
>
>
> Anyone have one of these ? How well does it perform ? One better than the
> other ?
>
> Pixel Technologies RF PRO-1B
> Wellbrooke Communications ALA 1530
>
> Bob
> K6UJ
>

9946. Re: [loopantennas] Re: magnetic loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-22 11:37:11 UTC
From: Jack Smith
Topic: 9942 Message: 9946

Pixel's power coupler requires more than 12V because the loop amplifier module has an on-board 13.6V regulator. Given the typical voltage regulator overhead, IR loss in inductors in the loop amp and the coupler, plus IR loss in the coax cable, you need about 18V minimum into the coax cable at the DC coupler end.

Feeding the loop amplifier with higher voltage and employing a voltage regulator at the amplifier end is a design decision to provide the same high level of performance over a range of voltage and temperature.

It is possible to feed the DC coupler with battery power, but since the DC coupler has a bridge rectifier and its own voltage regulator, plus IR drop in chokes, you would need a minimum of 24V DC into the coupler. (This is based on a quick mental calculation; I have not measured the required voltage nor added a safety factor for component tolerance.) A pair of 12V gel-cells in series should be OK, but I have not tested that configuration.

Jack
www.cliftonlaboratories.com

On 5/22/2013 7:08 AM, John wrote:
>
> I've used a Pixel Tech PRO-1a for several years. It's mounted on a 5
> ft mast section attached to my deck, placing the loop's center ~7.5 ft
> above the ground. I have the loop parallel to the house where it
> minimizes the powerline noise. That was to be a temporary mounting,
> but it works so well there, I left it. It is mechanically stout,
> having weathered a near-miss by the F3-F4 tornado of 1/27/12. My
> neighbors weren't so lucky. It did clean off the deck, however. I wish
> it had a 12V input for the power inserter - I could have listened
> during the power outages. They have one available now. I've had 145ft
> lw, TTFD, A-D Sloper, etc - the trees supporting the house end of the
> antennas had to be downed - too much storm damage. The PRO-1a is more
> quiet than even the TTFD - with similar signal levels from 2-18 MHz -
> the directional nature of the small loop makes a rotator helpful at MW
> and below. Great product - modular construction is a plus - as is the
> fact it was made in the USA. Check eHAM.com reviews for more ratings.
>
> John
>
> --- In loopantennas@yahoogroups.com
> <mailto:loopantennas%40yahoogroups.com>, "dx11" <dx11@...> wrote:
> >
> > You can find a comparison here:
> >

> > http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf
> >
> > As far I know the Pixel Pro-1B is nu much different from the Pro-1A.
> >
> > Cor Beijersbergen
> >
> >
> > Anyone have one of these ? How well does it perform ? One better
> than the
> > other ?
> >
> > Pixel Technologies RF PRO-1B
> > Wellbrooke Communications ALA 1530
> >
> > Bob
> > K6UJ
> >
>
>

9947. Re: magnetic loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-22 18:47:34 UTC
From: John
Topic: 9942 Message: 9947

In an e-mail from Doug Talley 3/2/12 of Pixel Technologies answering my query re a 12V power inserter, he replied, "We also have a different power inserter that will allow you to use 12V.". Perhaps the 13.6V regulator simply passes the current with little voltage drop across it's series pass regulator and combined IR losses. At any rate, I'll patch up a simple inserter and try it.

John

--- In loopantennas@yahoogroups.com, Jack Smith <Jack.Smith@...> wrote:
>
> Pixel's power coupler requires more than 12V because the loop amplifier
> module has an on-board 13.6V regulator. Given the typical voltage
> regulator overhead, IR loss in inductors in the loop amp and the
> coupler, plus IR loss in the coax cable, you need about 18V minimum into
> the coax cable at the DC coupler end.
>
> Feeding the loop amplifier with higher voltage and employing a voltage
> regulator at the amplifier end is a design decision to provide the same
> high level of performance over a range of voltage and temperature.
>
> It is possible to feed the DC coupler with battery power, but since the
> DC coupler has a bridge rectifier and its own voltage regulator, plus IR
> drop in chokes, you would need a minimum of 24V DC into the coupler.
> (This is based on a quick mental calculation; I have not measured the
> required voltage nor added a safety factor for component tolerance.) A
> pair of 12V gel-cells in series should be OK, but I have not tested that
> configuration.
>
> Jack
> www.cliftonlaboratories.com
>
> On 5/22/2013 7:08 AM, John wrote:
> >
> > I've used a Pixel Tech PRO-1a for several years. It's mounted on a 5
> > ft mast section attached to my deck, placing the loop's center ~7.5 ft
> > above the ground. I have the loop parallel to the house where it
> > minimizes the powerline noise. That was to be a temporary mounting,
> > but it works so well there, I left it. It is mechanically stout,
> > having weathered a near-miss by the F3-F4 tornado of 1/27/12. My
> > neighbors weren't so lucky. It did clean off the deck, however. I wish
> > it had a 12V input for the power inserter - I could have listened
> > during the power outages. They have one available now. I've had 145ft
> > lw, TTFD, A-D Sloper, etc - the trees supporting the house end of the
> > antennas had to be downed - too much storm damage. The PRO-1a is more
> > quiet than even the TTFD - with similar signal levels from 2-18 MHz -

> > the directional nature of the small loop makes a rotator helpful at MW
> > and below. Great product - modular construction is a plus - as is the
> > fact it was made in the USA. Check eHAM.com reviews for more ratings.
> >
> > John

9948. The Kaito KA-35 Active Antenna people need to know about.

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-24 10:06:51 UTC
From: richnlewis
Topic: 9948 Message: 9948

The Kaito KA-35 Active antenna is good for some DXing. I use a KA-1103 for some SW DXing and to improve local AM station reception occasionally. According to GCC Engineering on medium wave and Long wave the antenna is a untuned Antenna and can be modified to replace the untuned amplifier with a loop for AM and LW This is what I am looking for is to improve LW reception. On Shortwave the KA-35 with the whip is no better than using the whip antenna in my Kaito KA-1103. This has been discussed in a file on the longwaveradiostationlistening forum on Yahoo Groups under files - LW Antenna Projects and Experiments There you will find a file called GCC Engineering-KA-35 Antenna Tips.zip. These will give you some ideas on what you can do for MW and LW. I do have some ideas for what I want to do.

9949. Re: The Kaito KA-35 Active Antenna people need to know about.

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-25 05:19:09 UTC
From: Adam E
Topic: 9948 Message: 9949

Since I came up with this first and posted it on the long wave group, we need to work on it together. First, for this to work. The KA-35 antenna is a untuned broadband antenna amplifier, you can make alot of these using a J-FET or 2N3904 transistor.

The antenna that uses to tune the antenna is the Radio Shack Amplified Antenna with 2 modifications and that is changing the coils in a unused amplified antenna such as changing the 0.68 uH coils to 2.5 mH for L1 and 470 uH for L2 or 150 uH.

I added a 3 way switch and connected the inductors (2.5 mH - 470 uH - 150 uH) in series with the switching circuit. The KA-35 is a broadband active antenna and you can add in series a MFJ-956 or this experiment. The 20-280 can go as as low as 30 kHz, but the J-FET might need to be changed to expand even lower.

2.5 mH - 130 kHz to 320 kHz
470 uH - 320 kHz to 600 kHz
150 uH - 600 kHz to 1.8 MHz

Adam E.
Virginia Beach, VA

--- In loopantennas@yahoogroups.com, "richnlewis" <richnlewis@...> wrote:
>
> The Kaito KA-35 Active antenna is good for some DXing. I use a KA-1103 for some SW DXing and to improve local AM station reception occasionally. According to GCC Engineering on medium wave and Long wave the antenna is a untuned Antenna and can be modified to replace the untuned amplifier with a loop for AM and LW This is what I am looking for is to improve LW reception. On Shortwave the KA-35 with the whip is no better than using the whip antenna in my Kaito KA-1103. This has been discussed in a file on the longwaveradiostationlistening forum on Yahoo Groups under files - LW Antenna Projects and Experiments There you will find a file called GCC Engineering-KA-35 Antenna Tips.zip. These will give you some ideas on what you can do for MW and LW. I do have some ideas for what I want to do.
>

9950. Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-25 23:37:35 UTC
From: dziki64
Topic: 9950 Message: 9950

Hello. I'm looking for an article/website that made a broadcast band loop antenna using computer ribbon cable. I believe it used about 10 or 12 rows of the cable.

Any ideas?

Thanks!
Marty

9951. Re: [loopantennas] Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 03:01:21 UTC
From: Don
Topic: 9950 Message: 9951

Hi Marty,

Do you mean this one?

<http://www.hard-core-dx.com/nordicdx/antenna/hidden/carploop.html>

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FUNcube Dongle Pro+
FRG-100B DX-1000 SR-AF & LPF
DSP599zx MFJ-784B HD-1418 AF-1
MSB-1 PA0RDT Mini-Whip x2 @ 20ft
RYO Active Antenna @ 20ft
LFL1010 ALA100L x2

On 25-May-13 16:37, dziki64 wrote:
> Hello. I'm looking for an article/website that made a broadcast band loop antenna using computer ribbon cable. I believe it used about 10 or 12 rows of the cable.
>
> Any ideas?
>
> Thanks!
> Marty
>
>
>

9952. Re: [loopantennas] Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 03:38:27 UTC
From: kevin asato
Topic: 9950 Message: 9952

Bruce Carter had a 3 foot box loop that had about 12 "turns" of ribbon cable similar to the carpet loop but of smaller dimension. Can't locate that particular page now.
Earthlink/Mindspring has shutdown Bruce's site due to exceeding his bandwidth cap.
73,
kevin
kc6pob

From: Don <stb55@...>
To: loopantennas@yahoogroups.com
Sent: Saturday, May 25, 2013 8:01 PM
Subject: Re: [loopantennas] Looking for BCB Antenna - Ribbon Cable

Hi Mart

Do you mean this one?

<http://www.hard-core-dx.com/nordicdx/antenna/hidden/carploop.html>

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FUNcube Dongle Pro+
FRG-100B DX-1000 SR-AF & LPF
DSP599zx MFJ-784B HD-1418 AF-1
MSB-1 PA0RDT Mini-Whip x2 @ 20ft
RYO Active Antenna @ 20ft
LFL1010 ALA100L x2

On 25-May-13 16:37, dziki64 wrote:
> Hello. I'm looking for an article/website that made a broadcast band loop antenna using computer ribbon cable. I believe it used about 10 or 12 rows of the cable.
>
> Any ideas?
>
> Thanks!
> Marty
>
>
>

9953. Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 06:57:26 UTC
From: redsp
Topic: 9950 Message: 9953

--- In loopantennas@yahoogroups.com, kevin asato <kc6pob@...> wrote:
>
> Bruce Carter had a 3 foot box loop that had about 12 "turns" of ribbon cable similar to the carpet loop but of smaller dimension. Can't locate that particular page now. Earthlink/Mindspring has shutdown Bruce's site due to exceeding his bandwidth cap.

I can't help with advice on the antenna, but I can help with web hosting. I have a web hosting account and if Bruce wants to pay the $10 a year the domain name costs I would be happy to host his site under my account for free. I host a number of sites for friends. If Earthspring doesn't like his bandwidth usage, that won't be a problem with my account. Are we talking more than a TB per month? I was using nearly that much at one point and it wasn't a problem.

Rick

9954. Re: [loopantennas] Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 15:41:02 UTC
From: Nestor Escala
Topic: 9950 Message: 9954

Here there is a good Buce Carter's article:

http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Best regards,

Nestor

El 26/05/2013 03:57 a.m., redsp escribi?:
>
>
>
> --- In loopantennas@yahoogroups.com
> <mailto:loopantennas%40yahoogroups.com>, kevin asato <kc6pob@...> wrote:
> >
> > Bruce Carter had a 3 foot box loop that had about 12 "turns" of
> ribbon cable similar to the carpet loop but of smaller dimension.
> Can't locate that particular page now. Earthlink/Mindspring has
> shutdown Bruce's site due to exceeding his bandwidth cap.
>
> I can't help with advice on the antenna, but I can help with web
> hosting. I have a web hosting account and if Bruce wants to pay the
> $10 a year the domain name costs I would be happy to host his site
> under my account for free. I host a number of sites for friends. If
> Earthspring doesn't like his bandwidth usage, that won't be a problem
> with my account. Are we talking more than a TB per month? I was using
> nearly that much at one point and it wasn't a problem.
>
> Rick
>

--
Caselle da 1GB, trasmetti allegati fino a 3GB e in piu' IMAP, POP3 e SMTP autenticato?
GRATIS solo con Email.it http://www.email.it/f

Sponsor:
Stampa le tue FOTO SU TELA! Su MisterCupido.com puoi creare Quadri Personalizzati a partire da soli euro 18.90 - Consegne in tutta Italia in soli 2-3 giorni
Clicca qui: http://adv.email.it/cgi-bin/foclick.cgi?mid=12388&d=26-5

9955. QST on transmission lines

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 15:47:15 UTC
From: Brian Burns
Topic: 9955 Message: 9955

Hello All,

Since we had a lot of discussion recently on transmission lines, I took special notice of an article in an old back issue of QST. "My Feedline Tunes My Antenna" by Byron Goodman W1DX is in the March 1956 issue. It's an excellent article on the fundamentals by one of the all time best ARRL writers.

You can download it from the ARRL site if you are a member, but if you are not, let me recommend AMForever. Register for free to this excellent forum, and click on Publications. You get access to scanned copies of ALL of the back issues of QST and a number of other ham publications as well. If you are interested in AM and Boatanchors, as I am, there are a bunch of well informed and helpful guys that contribute there.

Cheers,

Brian Burns

Intelligence is common--wisdom is rare. Thomas Sowell is a wise man:

<http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1>
http://www.youtube.com/watch?v=5KHdhrNhh88&NR=1

9956. Re: [loopantennas] Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 15:53:19 UTC
From: kevin asato
Topic: 9950 Message: 9956

That's the easy to find one. He had several pages of loop antennas including 3 foot box loop using (computer) ribbon cable.
73,
kevin
kc6pob

From: Nestor Escala <nestor@...>
To: loopantennas@yahoogroups.com
Sent: Sunday, May 26, 2013 8:41 AM
Subject: Re: [loopantennas] Re: Looking for BCB Antenna - Ribbon Cable

Here there is a good Buce Carter's article:

http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Best regards,

Nestor

El 26/05/2013 03:57 a.m., redsp escribió:

>
>
>--- In loopantennas@yahoogroups.com, kevin asato <kc6pob@...> wrote:
>>
>> Bruce Carter had a 3 foot box loop that had about 12
"turns" of ribbon cable similar to the carpet loop but of
smaller dimension. Can't locate that particular page now.
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exceeding his bandwidth cap.
>
>I can't help with advice on the antenna, but I can help
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I host a number of sites for friends. If Earthspring
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I was using nearly that much at one point and it wasn't a
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>
>Rick
>

Caselle da 1GB, trasmetti allegati fino a 3GB e in piu' IMAP, POP3 e SMTP autenticato?

GRATIS solo con Email.it

Sponsor:
Stampa le tue FOTO SU TELA! Su MisterCupido.com puoi creare Quadri Personalizzati a partire da soli euro 18.90 - Consegne in tutta Italia in soli 2-3 giorni
Clicca qui

9957. Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 05:36:06 UTC
From: rob_shelton_66
Topic: 9950 Message: 9957

Something like this?
http://www.instructables.com/id/Medium-Wave-AM-broadcast-band-resonant-loop-antenn/

Or maybe something from this page, maybe about half way down?
http://www.dxzone.com/tag-ribbon-cable-loop/9.html

Hope these might help. I'm new to this group so I might not know what you are looking for!

Good Luck,
Rob

--- In loopantennas@yahoogroups.com, "dziki64" <dziki64@...> wrote:
>
> Hello. I'm looking for an article/website that made a broadcast band loop antenna using computer ribbon cable. I believe it used about 10 or 12 rows of the cable.
>
> Any ideas?
>
> Thanks!
> Marty
>

9958. Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-26 17:41:30 UTC
From: radio listener
Topic: 9950 Message: 9958

Wayback Machine found it...

http://web.archive.org/web/20070518051928/http://www.mindspring.com/~loop_antenna/ribbonloop.htm

It's also included in here
http://www11.zetatalk.com/docs/Radio/Antennas/Am_Loop_Antennas_2004.pdf

73
Tony

@swlistener
http://swlistener.wordpress.com

--- In loopantennas@yahoogroups.com, "dziki64" <dziki64@...> wrote:
>
> Hello. I'm looking for an article/website that made a broadcast band loop antenna using computer ribbon cable. I believe it used about 10 or 12 rows of the cable.
>
> Any ideas?
>
> Thanks!
> Marty
>

9959. Re: [loopantennas] Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-27 03:44:50 UTC
From: wharpt@...
Topic: 9950 Message: 9959

Is this what you are looking for?

http://web.archive.org/web/20030406105018/http://www.mindspring.com/~loop_antenna/ribbonloop.htm

Wharpt

In a message dated 5/26/2013 10:53:23 A.M. Central Daylight Time, kc6pob@... writes:

9960. Re: [loopantennas] Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-27 04:39:41 UTC
From: kevin asato
Topic: 9950 Message: 9960

that's the one I was trying to look for. Not sure what the original poster wanted.

Now saved in my archives.
73,
kevin
kc6pob

From: "wharpt@..." <wharpt@...>
To: loopantennas@yahoogroups.com
Sent: Sunday, May 26, 2013 8:44 PM
Subject: Re: [loopantennas] Re: Looking for BCB Antenna - Ribbon Cable

Is this what you are looking for?
http://web.archive.org/web/20030406105018/http://www.mindspring.com/~loop_antenna/ribbonloop.htm

Wharpt

In a message dated 5/26/2013 10:53:23 A.M. Central Daylight Time,
kc6pob@... writes:

9961. Re: Looking for BCB Antenna - Ribbon Cable

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-05-28 01:19:19 UTC
From: dziki64
Topic: 9950 Message: 9961

Tony,
Yes, this is it. The web.archive.org article is what I was looking for. THANK YOU and thanks to all who posted. Much appreciated!

Marty

--- In loopantennas@yahoogroups.com, "radio listener" <swlistener.email@...> wrote:
>
> Wayback Machine found it...
>
> http://web.archive.org/web/20070518051928/http://www.mindspring.com/~loop_antenna/ribbonloop.htm
>
> It's also included in here http://www11.zetatalk.com/docs/Radio/Antennas/Am_Loop_Antennas_2004.pdf
>
> 73
> Tony
>
> @swlistener
> http://swlistener.wordpress.com
>
> --- In loopantennas@yahoogroups.com, "dziki64" <dziki64@> wrote:
> >
> > Hello. I'm looking for an article/website that made a broadcast band loop antenna using computer ribbon cable. I believe it used about 10 or 12 rows of the cable.
> >
> > Any ideas?
> >
> > Thanks!
> > Marty
> >
>

9962. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-01 20:21:09 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 9962

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

9963. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-01 20:21:09 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 9963

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

9964. LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-01 19:04:37 UTC
From: n0sa@att.net
Topic: 9964 Message: 9964

I recently received the AAA-1B loop amplifier from LZ1AQ.
http://www.lz1aq.signacor.com/
I must say that this is a very nice amplifier and so far I am very pleased with my purchase. Total price with shipping to the US was about $120 and I think it was a real bargain. It has multiple options for hooking up different loops and dipole elements. It is shipped with the amplifier in a nice waterproof case and the matching/power inserter unit. He uses shielded cat5 wire to carry the RF, control signals and supply voltage to the amp. This is a unique way to do it and I like it a lot. Cat5 shielded is pretty inexpensive and the connectors are reasonably price too. Being an Electrician I am familiar with these terminations and have installed hundreds of them.
The documentation on the webpage is top notch and gives a few examples of possible antenna configurations and the pros and cons of each. I tried the double vertical loop setup with two 5/8" copper tubing loops about 28" in diameter. Just playing with it in the backyard I was able to see how good it really works. Reception was good and the nulls on local BC stations was very sharp and deep.
I was so impressed with the quality and the possibilities that I ordered a second amp so I can do A-B testing with different configurations.
If you like loops and like to play with them then this is a great platform to experiment with and come up with a nice antenna for your location.
I have no connection with Chavdar (LZ1AQ) other than some nice e-mails and a great product. Just wanted to get the word out about what is in my opnion a very nice product.
Check out his website for all the information.
Larry
n0sa

9965. Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-02 07:24:15 UTC
From: john
Topic: 9964 Message: 9965

Totally agree, Larry. I have had mine for a few months and it is my listening antenna of choice. Highly recommended.

Cheers, John

9966. Re: [loopantennas] LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-02 14:43:17 UTC
From: Chris Trask
Topic: 9964 Message: 9966

>
>I recently received the AAA-1B loop amplifier from LZ1AQ.
>http://www.lz1aq.signacor.com/
>I must say that this is a very nice amplifier and so far I am very pleased with my purchase.
>

<<SNIP>>

I've seen the schematic for this in the one article linked on that web page. Nice, simple design that shows that he understands the need for a very low input impedance amplifier for wideband active loop antenna operation. Much less costly than the one I designed, though mine undoubtedlt has better IMD and NF performance.

Chris

9967. Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-02 13:22:16 UTC
From: n0sa@att.net
Topic: 9964 Message: 9967

John
How do you have yours set up?
Have you experimented with the different antenna options?
I plan to do some comparisons when I get my second amp.
Larry
n0sa

--- In loopantennas@yahoogroups.com, "john" <deju5us@...> wrote:
>
> Totally agree, Larry. I have had mine for a few months and it is my listening antenna of choice. Highly recommended.
>
> Cheers, John
>

9968. Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-04 11:35:12 UTC
From: john
Topic: 9964 Message: 9968

Hi Larry,

I have mine set up as a simple loop and have not played with some of the other options. My loop is a piece of flat aluminium strip placed inside a 3 metre lenght of 25 mm plastic piping, bent into a circle and held together with a T piece. Leads were attached to each end before bending to be brought out and attached to the electronics. when bent. Can send a pic if the description is a bit obscure

. My Dx friend across town used the same technique which is simple, robust and cheap.Very sharp nulls and works well with the loop amp.

Cheers, John

9969. Re: [loopantennas] Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-04 12:37:59 UTC
From: brian nsl
Topic: 9964 Message: 9969

John,
What section is the aluminium flat bar ?????
I would certainly like to see a photo of the antenna please.
Regards,
72, Brian, GØNSL.
----- Original Message -----
From: john
To: loopantennas@yahoogroups.com
Sent: Tuesday, June 04, 2013 12:35 PM
Subject: [loopantennas] Re: LOOP AMPLIFIER

9970. Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-04 15:26:59 UTC
From: n0sa@att.net
Topic: 9964 Message: 9970

John
Thank you for the information.
I have mine set up in the dual vertical loop configuration.
I used two 5/8" copper tubes about 28" in diameter and get very deep nulls on local NDBs and local BC stations.
I also want to try out the dipole options.
I may even try some bigger loops made with dual copper wires.
Chavdar gives some good suggestions and information on the pros and cons of each style on his website.
Larry
n0sa

9971. Palstar LA-30 Rotating Loopstick Lowband RX Antenna for sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-05 02:05:12 UTC
From: William Hein
Topic: 9971 Message: 9971

I purchased this high performance, ruggedly built loopstick antenna in 2010 and never got around to using it. I now live in a house that is partially underground (not good for indoor antennas) and have room for Beverage antennas so this - new condition, only used to test performance - unit is for sale along with the the accessory plug-ins loopsticks for long wave (110 kHz to 550 kHz and tropical band (1480 kHz to 7.5 MHz). Note the base unit covers MW 410 kHz to 2.05 MHz.

From the Palstar Website:

http://www.palstar.com/en/la30/

"The new Palstar LA30 Ferrite Loopstick Antenna is designed for the avid LF, MW, and Tropical Band SW listener. The LA30 is a rotating loopstick antenna using active electronics to give high selectivity & gain. The tunable pre-selector ensures best possible weak signal reception and interference rejection.

"A hi-Q pre-selector eliminates interference from powerful nearby stations. A +15 dB pre-amplifier pulls in weak stations, while a 15 dB attenuator prevents overload when listening to strong stations. Rear switch can select either wall transformer input or a 9V internal AA battery pack.

"Add 11 Ga. (.090" thick) iridite-treated aluminum metalwork and durable powder coated finish on the front panel and top cover, and you have the LA30."

Would cost you over $510 today, will sell for $399 plus shipping and insurance (or you pick up near Grand Junction CO). Non-smoking shack. Serial number 14929. PayPal preferred or will take check or Wal-Mart money order.

Picture at eHam:

http://www.eham.net/classifieds/detail/409608

73
Bill

73
Bill AA7XT
ex-AA6TT, NT1Y

William Hein, AA7XT
ex-AA4XT, NT1Y, AA6TT, KC6EDP

Blog AA7XT.com

ARRL, CSVHF & AMSAT Life Member
UKSMG & QCWA Member
1st licensed 1969 - WN6NDC

1st W to OH0 6m QSO
1st North America to Asia 60m QSO
Founder TopBand email reflector

Tel +1 (970) 628-5120
Email Bill.AA7XT@...
Loc: DM59pa
AIM / iChat / iMessage william.hein@...
Skype williamhein

9972. Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-06 12:02:40 UTC
From: john
Topic: 9964 Message: 9972

Hi Brian, the aluminium is simply a standard size strip of about 25mm x 3mm x 3m long. Will post a photo in the next few days. Imagine a piece of plastic pipe bent in a circle with each end secured in a 'T piece'. the aluminium strip is placed in the pipe before bending it around ie it is inside the pipe and bends along with it. Make sure connection wires come out through small holes drilled in the joiner. Connect one to each end of the strip, drill a small hole in each end of the arms of the T. Feed one wire from the inside to the outside, secure that end of the pipe in the T piece, bend the other end around into a circle, feed the other wire connection out through the hole on the other side then secure the pipe into the fitting.

At this point you should have a length of plastic pipe bent into a circle with both ends secured by the T. Inside is a flat aluminium strip with a wire connected to each end coming out through small holes drilled into each arm of the T. That is your loop ready to connect to an enclosure with the electronics inside. It should be easy to use standard fittings to mount it on a support.

All the pieces were just standard fittings from the hardware store's plumbing section. Total cost was maybe $25 and the whole thing is light and robust. Add LZ1AQ's loop amp and some CAT5 cable and I have a wellbrooke equivalent for maybe a third the cost of importing one. This is a great recieve antenna and has the advantage that I can knock down the local pest with a sharp null.

Cheers, John

9973. Re: [loopantennas] Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-06 13:49:04 UTC
From: brian nsl
Topic: 9964 Message: 9973

John,
Thank you for the response to my query, most kind.
Your 25mm x 3mm flat strip I make equivalent to the surface area of
an 18mm dia tube in RF skin terms which is about the same diameter
as Welbrook use for the ALA-1530 !!!!
Certainly our local DIY warehouse sells strip in 3m long lengths so
will check out the cross sections available.
From your clear description assembly sounds straightforward,
the secret being not to lose the wire tail hi!
As a matter of interest I had similar thoughts on using a 3ft dia plastic
' Hula Hoop ' with rolled up turkey strength cooking foil as the core
these are just the correct dia to fit into PVC 18mm electrical conduit
fittings like ' T's, junction boxes, elbows etc ' which has the advantage
of being much stronger than PVC water pipe.
To date I have never heard of anyone who has taken a Wellbrook ALA-1530
apart !!!!!
I will let you know how I fare with my version of the loop.
My particular interest is NDB and 28 mhz beacon monitoring.
Your comments on nulling the local ' pest ' out is of much interest
as I have 349.5 khz - Liverpool just 8 miles away, a real pain !!!!!
Regards,
72, Brian, GØNSL.
----- Original Message -----
From: john
To: loopantennas@yahoogroups.com
Sent: Thursday, June 06, 2013 1:02 PM
Subject: [loopantennas] Re: LOOP AMPLIFIER

9974. Re: [loopantennas] Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-06 12:28:14 UTC
From: mrnavy2@gmail.com
Topic: 9974 Message: 9974
Attachments: 2 described; binary payloads are missing from this source WARC

```
[ Attachment content not displayed ]
```

9975. Re: [loopantennas] Re: LOOP AMPLIFIER

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-07 10:23:12 UTC
From: Andrew Ikin
Topic: 9964 Message: 9975

Brian wrote on June 6.

"Your 25mm x 3mm flat strip I make equivalent to the surface area of
an 18mm dia tube in RF skin terms which is about the same diameter
as Welbrook use for the ALA-1530 !!!!"

Brian,

The loop amplifier in question has a very low input impedance, hence there will be a miss-match at MF and HF when using a loop with the above dimensions. Whilst this may not be an issue for just nullinng out a pest. There will be noticeable loss in s/n compared to Pixel and Wellbrook loops that use higher input impedance amplifiers.

A very low input z amp. requires a much lower reactance loop. This is not easy to achieve whilst maintaining a reasonable capture area.

Earlier this year I received updated Calibration data for the LFL1010 (same amp as the 1530, but a much lower input z) and compared it to the ALA1530. The net result was an approx. 10dB improvement is sensitivity at MF and HF with the higher input z ALA1530.

Kind regards

Andrew

9976. Dual Coil Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-07 11:16:43 UTC
From: Everett
Topic: 9976 Message: 9976

Yesterday I posted, in the files section, an article " Dual Coil, Tuned Air Loop SW Antenna for 1.6 MHz to 20 MHz Coverage "

73's Everett

9977. Re: [loopantennas] Dual Coil Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-07 11:59:30 UTC
From: Stacy Williams
Topic: 9976 Message: 9977

Hello Everett

Thanks for the tip about your PDF on this subject, which is really, interesting. Regarding the use of two coils with a working loop, from my personal experience, they do work very well. Intact, I had a small wire loop receiving signals with two large wire coils distal to the end feeds. The loop was just 14meters in diameter and the child fed into an unun. This antenna was really good too, many shortwave listeners were contacting me to advise that they were witness to my DX.

As for all electrically short antennas, they do work very well, especially for users who are limited by space!

Please can anyone advise on where around 20 meters of PEX tube, 32mm diameter, can be purchased in the UK?

Regards

Stacy
m0wsa

Spooky action at a distance.....
On Jun 7, 2013 12:17 PM, "Everett" <everettsharp@aol.com> wrote:

> **
>
>
> Yesterday I posted, in the files section, an article " Dual Coil, Tuned
> Air Loop SW Antenna for 1.6 MHz to 20 MHz Coverage "
>
> 73's Everett
>
>
>

9978. Re: Dual Coil Loop Antenna - OT follow up

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-08 14:59:17 UTC
From: w8rmv
Topic: 9976 Message: 9978

Any comments on the CR-1? I like it, but I do own an R75 already.
73 - Bob

--- In loopantennas@yahoogroups.com, "Everett" <everettsharp@...> wrote:
>
> Yesterday I posted, in the files section, an article " Dual Coil, Tuned Air Loop SW Antenna for 1.6 MHz to 20 MHz Coverage "
>
> 73's Everett
>

9979. Antenna location for a loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-11 15:22:17 UTC
From: Editor
Topic: 9979 Message: 9979

Question:

Where is the best place to mount a magnet loop antenna (it is two Hermes 1.2 Meter loops phased together - 4 meters separation - fairly directional)?

I am thinking to mount the system on our office complex roof which is a fairly large flat surface with a few HVAC units on it. Mounting up on the roof provides a bit of safety from all the copper thieves who are going through office parks these days and stealing whatever in not screwed down.

The antenna would be about 20 feet above the parking lot and we are located right next to the San Francisco Bay with nothing to the west of our complex except water. All the roofs in the area are about the same height as ours. I can send photos if needed.

Ideas and comments always welcome.

Thanks.

Kevin

9980. Re: [loopantennas] Antenna location for a loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-11 15:46:11 UTC
From: dreagin@...
Topic: 9979 Message: 9980

Kevin...My only advice would be to mount the antenna as close to the center of the building as possible in order to avoid detection from the copper thieves you have mentioned.I have read that at 20' and above ground level,it should be mounted in a horizontal configuration.It sounds like it will work well from that geographical location.Dennis W7KB

----- Original Message -----
From: Editor <editor@...>
To: loopantennas@yahoogroups.com
Sent: Tue, 11 Jun 2013 11:22:17 -0400 (EDT)
Subject: [loopantennas] Antenna location for a loop antenna

Question:

Where is the best place to mount a magnet loop antenna (it is two Hermes 1.2 Meter loops phased together - 4 meters separation - fairly directional)?

I am thinking to mount the system on our office complex roof which is a fairly large flat surface with a few HVAC units on it. Mounting up on the roof provides a bit of safety from all the copper thieves who are going through office parks these days and stealing whatever in not screwed down.

The antenna would be about 20 feet above the parking lot and we are located right next to the San Francisco Bay with nothing to the west of our complex except water. All the roofs in the area are about the same height as ours. I can send photos if needed.

Ideas and comments always welcome.

Thanks.

Kevin

9981. Re: Dual Coil Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-12 18:20:47 UTC
From: Tony
Topic: 9976 Message: 9981

Hi Everett,
txs for uploading your pdf file on the dual coil loop.
Could you please specify more how you attach the 2 coils together with "hollow nylon spacers"..? Perhaps a picture could explain everything...?
Txs for your time answering my question.

Kind regards

Tony
ON4TVT

--- In loopantennas@yahoogroups.com, Stacy Williams <slateblue69@...> wrote:
>
> Hello Everett
>
> Thanks for the tip about your PDF on this subject, which is really,
> interesting. Regarding the use of two coils with a working loop, from my
> personal experience, they do work very well. Intact, I had a small wire
> loop receiving signals with two large wire coils distal to the end feeds.
> The loop was just 14meters in diameter and the child fed into an unun.
> This antenna was really good too, many shortwave listeners were contacting
> me to advise that they were witness to my DX.
>
> As for all electrically short antennas, they do work very well, especially
> for users who are limited by space!
>
> Please can anyone advise on where around 20 meters of PEX tube, 32mm
> diameter, can be purchased in the UK?
>
> Regards
>
> Stacy
> m0wsa
>
> Spooky action at a distance.....
> On Jun 7, 2013 12:17 PM, "Everett" <everettsharp@...> wrote:
>
> > **
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> > Air Loop SW Antenna for 1.6 MHz to 20 MHz Coverage "
> >
> > 73's Everett
> >
> >

> >
>

9982. Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-16 20:07:29 UTC
From: Gian
Topic: 9982 Message: 9982

Hi all,

I have just joined the group.

I am looking for a project/guidelines to homebrew a mobile half a loop HF antenna for emergency communications, to be mounted over a car roof. The antenna should cover al least 40 and 80m, with potential use on 160m. We expect to use at least 50W RF or maybe 100Wrf.

Any experience with such a kind of antennas?

A search on internet gives only a couple of commercial antennas.

Thanks and best 73

Gian
I7SWX

9983. Max

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-17 01:25:25 UTC
From: Max
Topic: 9983 Message: 9983

wer
http://www.comitecoop.org/onbo/luww/bxme/lmqnvaqlr.php Max

9984. Re: [loopantennas] Max

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-17 14:47:25 UTC
From: Chris Trask
Topic: 9983 Message: 9984

Looks like someone else has been hacked. Sure is a lot of this going around lately.

Chris

-----Original Message-----
>From: Max <kb7xu@...>
>Sent: Jun 16, 2013 6:25 PM
>To: Jeff Lemley <jlemley1@...>, Karen J Lewis <karenlewis103@...>, Bonnie Lind <bjlind@...>, Chuck Lind <clind@...>, Loop Antennas <loopantennas@yahoogroups.com>
>Subject: [loopantennas] Max
>
>wer
>http://www.comitecoop.org/onbo/luww/bxme/lmqnvaqlr.php Max

9985. Re: [loopantennas] Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-17 18:09:24 UTC
From: Andy
Topic: 9982 Message: 9985

Gian <i7swx@...> wrote:

> I am looking for a project/guidelines to homebrew a mobile half a loop HF
> antenna for emergency communications, to be mounted over a car roof.

There are some antennas like that mentioned occasionally on the [NVIS] Yahoo!group.

Because they are electrically small on the lower HF bands, and close to the ground, they tend to be rather inefficient. But if you need to operate mobile on those bands, it is an option to consider.

The commercial versions tend to be very expensive. Perhaps more than a top-of-the-line radio would cost.

There are occasional links to pictures of homemade versions, usually without much detail. Radiation resistance tends to be low, so good bonding to the roof/vehicle is crucial. Don't think of it as mounting an antenna on your car; think of it as modifying your car to accommodate the new addition.

Andy

9986. Re: [loopantennas] Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-18 01:26:48 UTC
From: Rick Karlquist
Topic: 9982 Message: 9986

Andy wrote:
> Gian <i7swx@...> wrote:
>
>> I am looking for a project/guidelines to homebrew a mobile half a loop
>> HF
>> antenna for emergency communications, to be mounted over a car roof.
>

A loong time ago, QST had an article titled "The Connecticut Long Horn Antenna". Maybe that is what you a looking for.

Whatever loop you build, you need to decide whether you want horizontal or vertical polarization, which is determined by where you feed it.

Rick N6RK

9987. Re: [loopantennas] Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-18 01:31:36 UTC
From: ww0e@...
Topic: 9982 Message: 9987

Is this it - http://www.w1npp.org/events/2010/2010-F~1/ANTENNAS/MOBILE/670801~1.PDF

Jerry WW0E

----- Original Message -----
From: "Rick Karlquist" <richard@...>
To: loopantennas@yahoogroups.com
Sent: Monday, June 17, 2013 8:26:48 PM
Subject: Re: [loopantennas] Half Loop Mag Mobile Antenna

Andy wrote:
> Gian < i7swx@... > wrote:
>
>> I am looking for a project/guidelines to homebrew a mobile half a loop
>> HF
>> antenna for emergency communications, to be mounted over a car roof.
>

A loong time ago, QST had an article titled "The Connecticut Long Horn
Antenna". Maybe that is what you a looking for.

Whatever loop you build, you need to decide whether you want horizontal
or vertical polarization, which is determined by where you feed it.

Rick N6RK

9988. Re: [loopantennas] Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-18 01:46:46 UTC
From: Rick Karlquist
Topic: 9982 Message: 9988

ww0e@... wrote:
> Is this it -
> http://www.w1npp.org/events/2010/2010-F~1/ANTENNAS/MOBILE/670801~1.PDF
>
>
> Jerry WW0E

Yes, but it's not a loop. Sorry, my memory was faulty.

Rick N6RK

9989. Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-18 13:32:16 UTC
From: Gian
Topic: 9982 Message: 9989

Hi All,

thanks for your replies.

I am looking for a half mag loop to be installed over a car roofrack. Yes, I understand the car will become modified.

Certainly these kind of antennas have not the best performance but maybe not wortse than a very short mobile antenna positioned at 45° over the car roof or like the one in the QST article.

My basic questions are:

1) How is the capacitor value calculated and the minimum required voltage

2) what should be the minimum width of the half mirror side

3) what it will happen to the rf current over the car roof?

I have found several NVIS groups in yahoo. I enrolled in one nott too large, but the majorities have a very few members.

Best 73

Gian
I7SWX

--- In loopantennas@yahoogroups.com, Andy <ai.egrps@...> wrote:
>
> Gian <i7swx@...> wrote:
>
> > I am looking for a project/guidelines to homebrew a mobile half a loop HF
> > antenna for emergency communications, to be mounted over a car roof.
>
> There are some antennas like that mentioned occasionally on the [NVIS]
> Yahoo!group.
>
> Because they are electrically small on the lower HF bands, and close
> to the ground, they tend to be rather inefficient. But if you need to
> operate mobile on those bands, it is an option to consider.
>
> The commercial versions tend to be very expensive. Perhaps more than
> a top-of-the-line radio would cost.
>
> There are occasional links to pictures of homemade versions, usually
> without much detail. Radiation resistance tends to be low, so good
> bonding to the roof/vehicle is crucial. Don't think of it as mounting
> an antenna on your car; think of it as modifying your car to

> accommodate the new addition.
>
> Andy
>

9990. Re: [loopantennas] Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-19 04:22:26 UTC
From: Andy
Topic: 9982 Message: 9990

Gian <i7swx@...> wrote:

> I have found several NVIS groups in yahoo. I enrolled in one nott
> too large, but the majorities have a very few members.

The main NVIS group is simply "NVIS". It has well over 1000 members. It is not listed in the Yahoogroups directory (a signup group is listed instead, making it a 2-step process), but you can go directly to the group. Just substitute the word "NVIS" in the URL for any other Yahoogroup's name.

Andy

9991. Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-19 12:44:18 UTC
From: Gian
Topic: 9982 Message: 9991

Hi Andy,

thanks for your additional info.

Is the group the following?

NVIS-NearVerticalIncidentSkywave@yahoogroups.com

I have sent the mail requesting membership.

73

Gian
I7SWX

--- In loopantennas@yahoogroups.com, Andy <ai.egrps@...> wrote:
>
> Gian <i7swx@...> wrote:
>
> > I have found several NVIS groups in yahoo. I enrolled in one nott
> > too large, but the majorities have a very few members.
>
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> listed instead, making it a 2-step process), but you can go directly
> to the group. Just substitute the word "NVIS" in the URL for any
> other Yahoogroup's name.
>
> Andy
>

9992. Re: [loopantennas] Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-19 06:12:42 UTC
From: Craig Palmer KF5JYZ
Topic: 9982 Message: 9992

just use yahoo’s own search engine. go to your groups page where all your yahoo groups are listed and above them you’ll find a search box. pick a group that has lots of folks and they are active ,unless all you want is to look into there files n links.

Craig

From: Andy
Sent: Tuesday, June 18, 2013 11:22 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Half Loop Mag Mobile Antenna

Gian <mailto:i7swx%40yahoo.com> wrote:

> I have found several NVIS groups in yahoo. I enrolled in one nott
> too large, but the majorities have a very few members.

The main NVIS group is simply "NVIS". It has well over 1000 members.
It is not listed in the Yahoogroups directory (a signup group is
listed instead, making it a 2-step process), but you can go directly
to the group. Just substitute the word "NVIS" in the URL for any
other Yahoogroup's name.

Andy

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3345 / Virus Database: 3199/6421 - Release Date: 06/18/13

9993. Re: [loopantennas] Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-19 19:56:58 UTC
From: Andy
Topic: 9982 Message: 9993

> Is the group the following?
>
> NVIS-NearVerticalIncidentSkywave@yahoogroups.com

That is the "sign-up" group, not the real one. It will get you there
... eventually ... if you follow all the steps.

You can bypass that step by going directly to the NVIS group itself,
which is named simply "NVIS" instead of
"NVIS-NearVerticalIncidentSkywave".

(The reason for the multi-step process is to try to keep spam-bots
from joining the "real" group.)

Here are a few other (smaller, less active) NVIS-specific groups I know about:

NWNVIS
HFNVIS
NVIS-Antennas
International_NVIS_Association

These are all Yahoo!groups.

Andy

9994. Re: [loopantennas] Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-19 20:50:20 UTC
From: Andy
Topic: 9982 Message: 9994

A number of years ago, somewhere on the "NVIS" yahoogroup ... either on the group's site itself or in links to other sites ... there were pictures of a couple of vehicles with half-loop antennas welded on. Patricia Gibbons, one of the group's founders, who passed away a few years ago, had pictures of hers. IIRC she used an SGC antenna tuner at the feedpoint.

I don't recall seeing much in the way of theory or math.

Andy

9995. Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-21 07:49:52 UTC
From: Gian
Topic: 9982 Message: 9995

Hi All,

thanks for your feedbacks. THe NVIS request via mail, as suggested on the group did not work out, I got delivery error.

Yes, I have seen groups witha few peopleand not active. There is one group with over 10000 members ...too many but I will try there.

What I may try is to build an antenna with mechanical measures that will not be critiocal for cars roof and fiddle around it with a normal capacitor and use an antenna analyser, than, if the results are similar to a standard magloop I can go ahead. We can try with a qrp rtx if it work on tx too.

Best 73

Gian
I7SWX

--- In loopantennas@yahoogroups.com, Andy <ai.egrps@...> wrote:
>
> > Is the group the following?
> >
> > NVIS-NearVerticalIncidentSkywave@yahoogroups.com
>
> That is the "sign-up" group, not the real one. It will get you there
> ... eventually ... if you follow all the steps.
>
> You can bypass that step by going directly to the NVIS group itself,
> which is named simply "NVIS" instead of
> "NVIS-NearVerticalIncidentSkywave".
>
> (The reason for the multi-step process is to try to keep spam-bots
> from joining the "real" group.)
>
> Here are a few other (smaller, less active) NVIS-specific groups I know about:
>
> NWNVIS
> HFNVIS
> NVIS-Antennas
> International_NVIS_Association
>
> These are all Yahoo!groups.
>
> Andy
>

9996. MY new basket antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-21 05:50:52 UTC
From: Zacharias LIangas
Topic: 9996 Message: 9996

Please reply to zliangas@...

He is the link for theis antenna
https://sites.google.com/site/zliangas/baseketena

http://delicious.com/gr_greek1/zak (all my pages)

9997. Re: [loopantennas] Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-21 22:00:20 UTC
From: Andy
Topic: 9982 Message: 9997

Gian <i7swx@...> wrote:

> THe NVIS request via mail, as suggested on the group did not work out, I
got delivery error.

Try again! If you got a delivery error, it probably means it was sent to
the wrong address. The address for subscribing to the NVIS group should be:

NVIS-subscribe (at) yahoogroups.com

substituting the '@' symbol for the "(at)". (I wrote it that way because
Yahoo sometimes obscures email addresses within group messages.)

If you prefer to subscribe via the web, go to
http://groups.yahoo.com/group/NVIS/join but you will need a Yahoo account
to do that.

Regards,
Andy

9998. Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-22 16:33:40 UTC
From: va3ae
Topic: 9982 Message: 9998

If you have not seen this already it might provide food for thought.
<http://www.laud.no/la6nca/loop/>

73 de va3ae

9999. Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-23 18:55:19 UTC
From: Everett
Topic: 9999 Message: 9999

Hey Guys,

If anyone is interested I have 3 Broadband Active Loop Antenna boards that I made up while experimenting with board layout and evaluating performance. They all work very well using a 9 Volt battery and various wire loops from 1 to 2 meters in diameter. Two of them are using BC547 and one has 2N2222A transistors. They were all built Rat Shack perfboard

I would like to sell all 3 them to help cover the cost of parts and my time building them. I am asking $35 each plus postage. I would never build them and sell them at that price.

So if anyone is interested please contact me off list, erverettsharp@... and I will send you a wiring diagram and pictures of the Broadband Active Loop Antenna boards.

73's Everett N8CNP

10000. Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-24 16:20:41 UTC
From: Gian
Topic: 9982 Message: 10000

Thanks for your rely.

Yes, I did visit that site. The only problem is to understand how the half a loop works, i.e. what happen to RF currents un the mirror part of the loop and on the car real roof.

I will try to figure out the capacitor formula from the 14-30MHz example.

Thanks and best 73

Gian
I7SWX

--- In loopantennas@yahoogroups.com, "va3ae" <va3ae@...> wrote:
>
> If you have not seen this already it might provide food for thought.
> <http://www.laud.no/la6nca/loop/>
>
> 73 de va3ae
>

10001. Re: [loopantennas] Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-24 17:22:47 UTC
From: Andy
Topic: 9982 Message: 10001

Gian <i7swx@...> wrote:

> ... i.e. what happen to RF currents un the mirror part of the loop and on
> the car real roof.

For a half loop that connects to the roof on both ends, at the very least you have the loop current itself which completes its circuit via the roof. There would be some spreading out of the current in the roof, depending on frequency, I suppose.

Many mobile loops are complete loops that happen to rest slightly above the roof. That's a good question what happens in the roof in that case. I bet it depends a lot on loop orientation. Most of these small mobile loops are vertically oriented, but I have seen horizontal loops above the roof too. It would seem like the roof causes a "shorted turn" that is close coupled to the loop, which is probably not good.

Regards,
Andy

10002. Re: Half Loop Mag Mobile Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-26 20:11:57 UTC
From: Gian
Topic: 9982 Message: 10002

Hi Andy,

--- In loopantennas@yahoogroups.com, Andy <ai.egrps@...> wrote:
>
> Gian <i7swx@...> wrote:
>
> > ... i.e. what happen to RF currents un the mirror part of the loop and on
> > the car real roof.
>
> For a half loop that connects to the roof on both ends, at the very
> least you have the loop current itself which completes its circuit via
> the roof. There would be some spreading out of the current in the
> roof, depending on frequency, I suppose.

>
> Many mobile loops are complete loops that happen to rest slightly
> above the roof. That's a good question what happens in the roof in
> that case. I bet it depends a lot on loop orientation. Most of these
> small mobile loops are vertically oriented, but I have seen horizontal
> loops above the roof too. It would seem like the roof causes a
> "shorted turn" that is close coupled to the loop, which is probably
> not good.

I have a two bars roof rack across it (add-on). Would it be necessary to connect the loop mirror side to it or isolate it as strong current may spread ???

Best 73

Gian
>
> Regards,
> Andy
>

10003. Questions for the loop experts for MW Dxing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-30 00:46:05 UTC
From: neilbell99
Topic: 10003 Message: 10003

1. What is the main factor in determining loop nulling ability? Size of the loop, sharpness of tuning (Q), spacing of the wires, shape (Round or square), number of turns, etc.

2. Is there a significant difference in nulling effectiveness between an air-core loop and a ferrite bar antenna (like the twin-coil sold by Crane)

I want to buy (or make) a loop with excellent directivity, maximum size about 16 inches. Tuning capacitor of pretty good quality.

My receiver is fairly selective but some amplification would help a lot for the distant low power Graveyard stations.

Obviously something like the famous KIWA loop would be nice, but they are very hard to find and quite expensive.

Advice, comments or suggestions greatly appreciated. Currently I use a cheap Kaito an-100 loop directly connected to my Yaesu receiver.

Neil BEll, KJ6FBA

10004. Spectracom 8206 Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-06-30 23:11:49 UTC
From: Dennis Tillman
Topic: 10004 Message: 10004

Hi Everybody,

This is my first post to this forum although I'm a 10+ year member of the TekScopes Forum so I know how this works.

I have a Spectracom 8206 Antenna (Spectracom calls it a loop antenna, but I would call it a ferrite rod antenna) which worked fine until a few years ago. I took the antenna apart to troubleshoot it and at that point I discovered it was modified by the previous owner. I have not been able to figure out what the modifications were for and I have not found the problem that caused it to stop working. While troubleshooting it I inadvertently lost one of the transistors while I took it out of the faraday shield to test on a curve tracer.

Does anyone out there have a schematic for the preamp on the faraday shield inside the antenna? I have the manuals for the Receiver, the Phase Comparator, and the Chart Recorder but I have never found the schematics for the antenna itself. Spectracom was no help. They long ago stopped supporting it and insist that all documentation has been tossed.

John Ackermann (one of the expert TimeNuts) did a test of this antenna which indicates its combined Q is on the order of 1000! So it is not something that I would want to try and repair without having a schematic handy to see what the designers were thinking. See this for details of John's test:

http://www.febo.com/time-freq/wwvb/sig-strength/spectracom-antenna.html

Thanks, Dennis

10005. Re: [loopantennas] Questions for the loop experts for MW Dxing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-01 09:36:58 UTC
From: toddroberts2001@...
Topic: 10003 Message: 10005

The National Radio Club has some good handbooks on building a
good receiving loop for MW DXing.

My experience has been for best nulls you want a BALANCED loop.
That means one side of the loop is not grounded. Both ends of the loop
are above ground with a center-tap, usually used with a balanced preamp.

Tuning capacitor should be mostly symmetrical, not one side connected
to a big metal frame.

Using one of the newer one-turn broadband active loops solves many
problems. No tuning capacitor is used so the loop is well balanced
electrically.
Single-turn broadband loops have excellent nulls. No cumbersome remote
tuning capacitor needed if mounted outdoors.

73 - Todd WD4NGG

In a message dated 6/30/2013 4:38:25 P.M. Eastern Daylight Time,
neil.neilbell@... writes:

1. What is the main factor in determining loop nulling ability? Size of the
loop, sharpness of tuning (Q), spacing of the wires, shape (Round or
square), number of turns, etc.

2. Is there a significant difference in nulling effectiveness between an
air-core loop and a ferrite bar antenna (like the twin-coil sold by Crane)

I want to buy (or make) a loop with excellent directivity, maximum size
about 16 inches. Tuning capacitor of pretty good quality.

10006. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-01 14:55:58 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10006

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10007. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-01 14:55:58 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10007

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10008. c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-02 07:39:59 UTC
From: Vojtech
Topic: 10008 Message: 10008

Hello.

I stumbled over a patent US 6,529,169 B2 from C-Crane.
http://www.google.de/patents/US6529169

The patent claims, that:
"However, when a signal enters a ferrite rod antenna that is tuned to resonance with a coil and capacitor, the magnetic lines of flux begin to saturate. This is due to sympathetic resonance. ..... When this saturation occurs in a ferrite core antenna, the ferrite rod antenna takes on polarity, much like a standard magnet. Ferrite antennas of the prior art have only one pick-up coil, and this coil receives the sympathetic resonance from only one-half of the ferrite rod. This results in loss of efficiency and limits the signal-to-noise ratio available to the receiver electronics."

The patent sais, the two coils are wound in the same direction and connected in series. It looks to me like an analog to a single turn loop antenna with a capacitor at one side and a current transformer at the other side. I suppose the setup improves symmetry, but it eludes me how it lowers saturation at resonance, and the patent claims that the improvement is more pronounced at higher frequencies.

I wonder how the setup compares to the PalStar LA30
http://www.palstar.com/en/la30/
see te schematic here:
http://www.palstar.com/manual_la30.pdf

The PalStar LA30 works very similar in my opinion, the main difference being the coupling of the amplifier to the loop resonant circuit, where the C-Crane design is coupled with a transformer between the cols, while LA30 is coupled symmetrically at the ends. The C-Crane coupling may be more symmetric, but the way it is tuned with a single varactor at one end of the ferrite rod, the other end of the other coil grounded, it does not.

The patent also claims:
"Ferrite antennas of the prior art have only one pick-up coil, and this coil receives the sympathetic resonance from only one-half of the ferrite rod. This results in loss of efficiency and limits the signal-to-noise ratio available to the receiver electronics."

This souns like a wishful thinking.

Any opinion?

Thanks and 73, Vojtech OK1IAK

10009. Re: c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-02 15:03:20 UTC
From: Bruce Carter
Topic: 10008 Message: 10009

The CCrane EP radio has built in twin coil ferrite bar. It is not as sensitive as a GE SR-3 which has a single coil ferrite bar antenna the same size. I can only assume that it is the ferrite that is doing the work of concentrating flux in the coil, not the coil set.

10010. Re: [loopantennas] c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-02 15:57:56 UTC
From: Richard (Rick) Karlquist
Topic: 10008 Message: 10010

On 7/2/2013 12:39 AM, Vojtech wrote:
> Hello.
>
> I stumbled over a patent US 6,529,169 B2 from C-Crane.
> http://www.google.de/patents/US6529169
>
> The patent claims, that:
> "However, when a signal enters a ferrite rod antenna that is tuned to
> resonance with a coil and capacitor, the magnetic lines of flux begin to
> saturate. This is due to sympathetic resonance. ..... When this
> saturation occurs in a ferrite core antenna, the ferrite rod antenna

IMHO, this is total nonsense. There is no way a ferrite rod,
with its huge air gap, is ever going to saturate on receive
signals. In fact, you couldn't make it saturate if you tried
to by putting DC through it.

Rick N6RK

10011. Re: [loopantennas] c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-02 17:22:29 UTC
From: jose kucher
Topic: 10008 Message: 10011

The crane antenna have a twin coil, is like a single coil with a middle derivation

as the preamplifier is balanced the middle point of the coil is for work as a balanced coil to attach balanced preamp.

I will build a clone of the preamplifier for test it with my air-loop

jose kucher

Argentina

From: Richard (Rick) Karlquist
Sent: Tuesday, July 02, 2013 12:57 PM
To: loopantennas@yahoogroups.com
Cc: Vojtech
Subject: Re: [loopantennas] c-crane dual coil antenna?

On 7/2/2013 12:39 AM, Vojtech wrote:
> Hello.
>
> I stumbled over a patent US 6,529,169 B2 from C-Crane.
> http://www.google.de/patents/US6529169
>
> The patent claims, that:
> "However, when a signal enters a ferrite rod antenna that is tuned to
> resonance with a coil and capacitor, the magnetic lines of flux begin to
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> saturation occurs in a ferrite core antenna, the ferrite rod antenna

IMHO, this is total nonsense. There is no way a ferrite rod,
with its huge air gap, is ever going to saturate on receive
signals. In fact, you couldn't make it saturate if you tried
to by putting DC through it.

Rick N6RK

_____ Information from ESET NOD32 Antivirus, version of virus signature database 8517 (20130702) _____

The message was checked by ESET NOD32 Antivirus.

http://www.eset.com

_____ Information from ESET NOD32 Antivirus, version of virus signature database 8517 (20130702) _____

The message was checked by ESET NOD32 Antivirus.

http://www.eset.com

10012. Re: [loopantennas] c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-04 05:18:10 UTC
From: John Kolb
Topic: 10012 Message: 10012

The LA-30 looks very similar to circuitry used as far back as the 1970's, either home built, or sold commercially as the Radio West Ferrite Loop antenna, which used different coils to cover LF, MF and HF.

http://www.jlkolb.cts.com/site/dif_fet.pdf

The original circuit was probably done by Gorden West of National Radio Club.

I would think the two coils, to resonate with the same capacitor, would have the same combined inductance, and thusthe same number of turns as a single enter tapped coil, so the same voltage induced by the RF.

John
KK6IL

At 12:39 AM 7/2/2013, you wrote:
Hello.

I stumbled over a patent US 6,529,169 B2 from C-Crane.
http://www.google.de/patents/US6529169

....

The patent sais, the two coils are wound in the same direction and connected in series. It looks to me like an analog to a single turn loop antenna with a capacitor at one side and a current transformer at the other side. I suppose the setup improves symmetry, but it eludes me how it lowers saturation at resonance, and the patent claims that the improvement is more pronounced at higher frequencies.

I wonder how the setup compares to the PalStar LA30
http://www.palstar.com/en/la30/
see te schematic here:
http://www.palstar.com/manual_la30.pdf

10013. Re: [loopantennas] c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-04 05:36:04 UTC
From: Steve Ratzlaff
Topic: 10012 Message: 10013

This same topic came up several years ago. At that time I bought the Twin Coil antenna and tore it apart and tested it extensively on the bench. I used both the original twin coil then replaced it with a single coil. In all tests, there was no significant difference, if any differences at all, between the two configurations. And reading the patent, there are glaring errors seemingly purposely inserted to try to fool the unwary. It's a good antenna for its 7.5" ferrite rod size and works well and I recommend it if one needs a 7.5" ferrite rod remotely tunable antenna. But if you homebrew your own using a similar 7.5" rod from Amidon, and the standard single coil, you'll get the same performance. There is no magic at all in the use of "twin coils". If anything, it appeared the technician on the factory production line could more easily and quickly adjust the antenna for the proper tuning range, compared to a single coil--perhaps that's the main reason why the "twin coil" continues to be made.
73,
Steve AA7U

On 7/3/2013 10:18 PM, John Kolb wrote:
>
>
> The LA-30 looks very similar to circuitry used as far back as the 1970's,
> either home built, or sold commercially as the Radio West Ferrite Loop
> antenna, which used different coils to cover LF, MF and HF.
>
> http://www.jlkolb.cts.com/site/dif_fet.pdf
>
> The original circuit was probably done by Gorden West of National
> Radio Club.
>
> I would think the two coils, to resonate with the same capacitor, would
> have the same combined inductance, and thusthe same number of turns
> as a single enter tapped coil, so the same voltage induced by the RF.
>
> John
> KK6IL
>
> At 12:39 AM 7/2/2013, you wrote:
> Hello.
>
> I stumbled over a patent US 6,529,169 B2 from C-Crane.
> http://www.google.de/patents/US6529169
>
> ....
>

> The patent sais, the two coils are wound in the same direction and
> connected in series. It looks to me like an analog to a single turn
> loop antenna with a capacitor at one side and a current transformer at
> the other side. I suppose the setup improves symmetry, but it eludes
> me how it lowers saturation at resonance, and the patent claims that
> the improvement is more pronounced at higher frequencies.
>
> I wonder how the setup compares to the PalStar LA30
> http://www.palstar.com/en/la30/
> see te schematic here:
> http://www.palstar.com/manual_la30.pdf
>
>

10014. Re: [loopantennas] c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-04 12:03:57 UTC
From: Don
Topic: 10012 Message: 10014

Hi Steve,

Thanks! I did not know you did that investigation. I bought one a couple of years ago to hopefully improve the AM reception of my stereo in this metal can. The "twin-coil" was also about half price. Anyway, it did not help/improve reception in my case.

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FUNcube Dongle Pro+
FRG-100B DX-1000 SR-AF & LPF
DSP599zx MFJ-784B HD-1418 AF-1
MSB-1 PA0RDT Mini-Whip x2 @ 20ft
RYO Active Antenna @ 20ft
LFL1010 ALA100L x2

On 03-Jul-13 22:36, Steve Ratzlaff wrote:
>
>
> This same topic came up several years ago. At that time I bought the
> Twin Coil antenna and tore it apart and tested it extensively on the
> bench. I used both the original twin coil then replaced it with a single
> coil. In all tests, there was no significant difference, if any
> differences at all, between the two configurations. And reading the
> patent, there are glaring errors seemingly purposely inserted to try to
> fool the unwary. It's a good antenna for its 7.5" ferrite rod size and
> works well and I recommend it if one needs a 7.5" ferrite rod remotely
> tunable antenna. But if you homebrew your own using a similar 7.5" rod
> from Amidon, and the standard single coil, you'll get the same
> performance. There is no magic at all in the use of "twin coils". If
> anything, it appeared the technician on the factory production line
> could more easily and quickly adjust the antenna for the proper tuning
> range, compared to a single coil--perhaps that's the main reason why the
> "twin coil" continues to be made.
> 73,
> Steve AA7U
>

10015. Re: [loopantennas] c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-04 18:22:25 UTC
From: kevin asato
Topic: 10012 Message: 10015

It's similar to what xtal radio developers have been using - multiple air-wound coils in the same plane to help increase sensitivity to their crystal sets. The use of the ferrite bar allows a reduction in the coil size. Difference is that the crystal sets do not fix the position of the coils to allow for fine tuning of signals. I do similar using a Terk Advantage coil with my portable radios. It works but it is not a miracle worker.

73,
kevin
kc6pob

From: Don <stb55@...>
To: loopantennas@yahoogroups.com
Sent: Thursday, July 4, 2013 5:03 AM
Subject: Re: [loopantennas] c-crane dual coil antenna?

Hi Steve,

Thanks! I did not know you did that investigation. I bought one a couple of years ago to hopefully improve the AM reception of my stereo in this metal can. The "twin-coil" was also about half price. Anyway, it did not help/improve reception in my case.

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DSP599zx MFJ-784B HD-1418 AF-1
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On 03-Jul-13 22:36, Steve Ratzlaff wrote:
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> from Amidon, and the standard single coil, you'll get the same
> performance. There is no magic at all in the use of "twin coils". If
> anything, it appeared the technician on the factory production line
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> range, compared to a single coil--perhaps that's the main reason why the
> "twin coil" continues to be made.
> 73,
> Steve AA7U
>

10016. Re: c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 14:41:39 UTC
From: tmckee_k4zad
Topic: 10012 Message: 10016

Kevin,

I would much appreciate it if you would supply links to a site or two where one can learn more about Xtal set builders use of multiple air-wound coils in the same plane.

Thanks,

Tom
K4ZAD

****

--- In loopantennas@yahoogroups.com, kevin asato <kc6pob@...> wrote:
>
> It's similar to what xtal radio developers have been using - multiple air-wound coils in the same plane to help increase sensitivity to their crystal sets. The use of the ferrite bar allows a reduction in the coil size. Difference is that the crystal sets do not fix the position of the coils to allow for fine tuning of signals. I do similar using a Terk Advantage coil with my portable radios. It works but it is not a miracle worker.
>
> 73,
> kevin
> kc6pob
>
>
>
> _____
> From: Don <stb55@...>
> To: loopantennas@yahoogroups.com
> Sent: Thursday, July 4, 2013 5:03 AM
> Subject: Re: [loopantennas] c-crane dual coil antenna?
>
>
>
> Â
> Hi Steve,
>
> Thanks! I did not know you did that investigation. I bought one a couple
> of years ago to hopefully improve the AM reception of my stereo in this
> metal can. The "twin-coil" was also about half price. Anyway, it did not
> help/improve reception in my case.
>
> Don KPC6NDB
> Upland, CA
> 34.10 -117.63 1250ft
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> LFL1010 ALA100L x2
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> On 03-Jul-13 22:36, Steve Ratzlaff wrote:
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> > This same topic came up several years ago. At that time I bought the
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> > anything, it appeared the technician on the factory production line
> > could more easily and quickly adjust the antenna for the proper tuning
> > range, compared to a single coil--perhaps that's the main reason why the
> > "twin coil" continues to be made.
> > 73,
> > Steve AA7U
> >
>

10017. Re: [loopantennas] Re: c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 15:10:16 UTC
From: everettsharp@...
Topic: 10008 Message: 10017

Hi Kevin,

If you will look in the files section I have several articles that I have posted that will give you a lot of information on multi-coil loop antennas, where I have made various configurations with 2 and 3 coils in parallel as well as a Pollydoroff configuration. All of the various configurations, using more that one coil have made an improvement in performance over that of a single coil. Most of the experiments were done on either a Ferrite Sleeve Loop (FSL), or on Sstacked Toroid Loop Sticks (STLS). You will find them listed under my everettsharp74 email address. However, I do not use that address as my primary address, it is everettsharp (at) aol.

73's Everett N8CNP

In a message dated 7/5/2013 9:42:10 A.M. Central Daylight Time, mckeetajc@... writes:

Kevin,

I would much appreciate it if you would supply links to a site or two where one can learn more about Xtal set builders use of multiple air-wound coils in the same plane.

Thanks,

Tom
K4ZAD

****

--- In _loopantennas@yahoogroups.com_
(mailto:loopantennas@yahoogroups.com) , kevin asato <kc6pob@...> wrote:
>
> It's similar to what xtal radio developers have been using - multiple air-wound coils in the same plane to help increase sensitivity to their crystal sets. The use of the ferrite bar allows a reduction in the coil size. Difference is that the crystal sets do not fix the position of the coils to allow for fine tuning of signals. I do similar using a Terk Advantage coil with my portable radios. It works but it is not a miracle worker.
>
> 73,
> kevin
> kc6pob
>
>
>
> _____

> From: Don <stb55@...>
> To: _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)

> Sent: Thursday, July 4, 2013 5:03 AM
> Subject: Re: [loopantennas] c-crane dual coil antenna?
>
>
>
> Â
> Hi Steve,
>
> Thanks! I did not know you did that investigation. I bought one a couple
> of years ago to hopefully improve the AM reception of my stereo in this
> metal can. The "twin-coil" was also about half price. Anyway, it did not
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> > range, compared to a single coil--perhaps that's the main reason why
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> > "twin coil" continues to be made.
> > 73,
> > Steve AA7U
> >

>

10018. Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 15:46:58 UTC
From: Everett
Topic: 10018 Message: 10018

Hey Guys,

Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel, or something else along those lines.

Please send me anything of interest to my direct email address, everettsharp (at) aol.

73's Everett N8CNP

10019. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 16:06:44 UTC
From: Chris Trask
Topic: 10018 Message: 10019

>
>Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two
>that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some
>other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF
>design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel,
>or something else along those lines.
>
>Please send me anything of interest to my direct email address, everettsharp (at) aol.
>

This loop antenna amplifier of mine will outperform the Pixel and Wellbrook products:

http://www.home.earthlink.net/~christrask/Wideband%20Loop%20Antenna%20Amplifier.pdf

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10020. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 15:55:31 UTC
From: kkyahoo
Topic: 10018 Message: 10020

Maybe worth putting the info in the Files section? Kevin
----- Original Message -----
From: Everett
To: loopantennas@yahoogroups.com
Sent: Friday, July 05, 2013 4:46 PM
Subject: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Hey Guys,

Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel, or something else along those lines.

Please send me anything of interest to my direct email address, everettsharp (at) aol.

73's Everett N8CNP

10021. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 16:15:28 UTC
From: kkyahoo
Topic: 10018 Message: 10021

Chris,

Why is this better than the Wellbrook solution? I would be very interested to learn more. I think their designs have an impedance tracking circuit that matches the loop to the amp.

73

Kevin
----- Original Message -----
From: Chris Trask
To: loopantennas@yahoogroups.com ; loopantennas@yahoogroups.com
Sent: Friday, July 05, 2013 5:06 PM
Subject: Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

>
>Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two
>that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some
>other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF
>design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel,
>or something else along those lines.
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>Please send me anything of interest to my direct email address, everettsharp (at) aol.
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Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10022. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 16:57:17 UTC
From: Chris Trask
Topic: 10018 Message: 10022

>
> >
> > >
> > >Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two
> > >that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some
> > >other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF
> > >design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel,
> > >or something else along those lines.
> > >
> > >Please send me anything of interest to my direct email address, everettsharp (at) aol.
> > >
> >
> > This loop antenna amplifier of mine will outperform the Pixel and Wellbrook products:
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> > http://www.home.earthlink.net/~christrask/Wideband%20Loop%20Antenna%20Amplifier.pdf
>
>
>Why is this better than the Wellbrook solution? I would be very interested to learn more. I think their
>designs have an impedance tracking circuit that matches the loop to the amp.
>

Mine has better IMD performance, the result of adding augmentation to the common-base amplifier stages. The design sees the loop as a current source, so the amplifier only needs to have a very low input impedance, much the same as the design by LZ1AQ approaches the matching problem. You really don't want to try see the loop as a voltage source and try wideband matching it to a fixed load:

http://www.home.earthlink.net/~christrask/Wideband%20Loop%20Antenna%20Matching.pdf

Been there. Done that.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10023. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 17:37:33 UTC
From: Jim
Topic: 10018 Message: 10023

Does anyone supply a drilled and etched pcb for the Trask design?

Does Clifton Labs sell an amplifier that is per this schematic? What about an "equivalent" amplifier?

Tnx

Jim

----- Original Message -----
From: Chris Trask
To: loopantennas@yahoogroups.com ; loopantennas@yahoogroups.com
Sent: Friday, July 05, 2013 9:06 AM
Subject: Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

>
>Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two
>that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some
>other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF
>design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel,
>or something else along those lines.
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>Please send me anything of interest to my direct email address, everettsharp (at) aol.
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http://www.home.earthlink.net/~christrask/Wideband%20Loop%20Antenna%20Amplifier.pdf

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10024. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Ant...

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 17:50:20 UTC
From: everettsharp@...
Topic: 10024 Message: 10024

Thanks Chris,

Now I have a few questions: For Q1 through Q5 could I use 2N2222A, or BC 547, rather than the MPS6521 and could I use something like a MPF102, or J310 in place of the PN4416 in Q6?

Also could I use BN 73-202 for T1, 2, 4 & 5 and could it also be used for T3 and 6?

It does no have to be perfect, I just want to try it using some of the crap that I have in-house, without having to look all over the place for parts. It always cost more for shipping than most of the parts. You never can find all of the parts in one place.

One last question can I eliminate everything left of C2 & C3 and all of the L's use ferrite beads, I think that I have some 102 on hand.

Everett N8CNP

In a message dated 7/5/2013 11:07:46 A.M. Central Daylight Time, christrask@... writes:

>
>Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two
>that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some
>other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF
>design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel,
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Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE

http://www.home.earthlink.net/~christrask/

10025. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 17:40:24 UTC
From: kkyahoo
Topic: 10018 Message: 10025

I will buy a few if they are available, be great to have a kit of parts! KK

----- Original Message -----
From: Jim
To: loopantennas@yahoogroups.com
Sent: Friday, July 05, 2013 6:37 PM
Subject: Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

□

Does anyone supply a drilled and etched pcb for the Trask design?

Does Clifton Labs sell an amplifier that is per this schematic? What about an "equivalent" amplifier?

Tnx

Jim

----- Original Message -----
From: Chris Trask
To: loopantennas@yahoogroups.com ; loopantennas@yahoogroups.com
Sent: Friday, July 05, 2013 9:06 AM
Subject: Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

>
>Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two
>that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some
>other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF
>design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel,
>or something else along those lines.
>
>Please send me anything of interest to my direct email address, everettsharp (at) aol.
>

This loop antenna amplifier of mine will outperform the Pixel and Wellbrook products:

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Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE

http://www.home.earthlink.net/~christrask/

10026. RE: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 21:29:56 UTC
From: dx11
Topic: 10018 Message: 10026

Hello Everett,
Here I have two designs - in fact two versions of the same concept - of active broadband loops.
The first article is in Dutch, but you will understand the schematics, the second site is in English, but you have to register. Nothing awkward will happen if you do.

http://dijkjj.home.xs4all.nl/download/bqc-wl1030xx.pdf
http://wl1030.pa3ang.nl/content/

Cor Beijersbergen

-----Original Message-----
From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of Everett
Sent: vrijdag 5 juli 2013 17:47
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Hey Guys,

Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor than the M0AYF design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel, or something else along those lines.

Please send me anything of interest to my direct email address, everettsharp (at) aol.

73's Everett N8CNP

10027. Re: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Ant...

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-05 22:20:56 UTC
From: everettsharp@...
Topic: 10024 Message: 10027

Hi Cor,

Thank you very much for the web sites. I download them both on to my memory stick and will look them both over. I noticed that they both are using OPAMPS.

Everett

In a message dated 7/5/2013 4:29:57 P.M. Central Daylight Time, dx11@... writes:

Hello Everett,
Here I have two designs - in fact two versions of the same concept - of active broadband loops.
The first article is in Dutch, but you will understand the schematics, the second site is in English, but you have to register. Nothing awkward will happen if you do.

http://dijkjj.home.xs4all.nl/download/bqc-wl1030xx.pdf
http://wl1030.pa3ang.nl/content/

Cor Beijersbergen

-----Original Message-----
From: _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com) [mailto:_loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)] On Behalf Of Everett
Sent: vrijdag 5 juli 2013 17:47
To: _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com)
Subject: [loopantennas] Wiring diagrams/schematics for a Broadband Active Loop Antenna

Hey Guys,

Does anyone have any wiring diagrams/schematics for a Broadband Active Loop Antenna, other than the two that are currently on the web, the M0AYF and LZ1AQ, both of which I have built and am wanting to try some other designs that might be better. So far it looks like the LZ1AQ has a lower noise floor
than the M0AYF design. However, both designs work well. Would be nice if someone had a schematics for Wellbrook or Pixel, or something else along those lines.

Please send me anything of interest to my direct email address, everettsharp

(at) aol.

73's Everett N8CNP

10028. Re: [loopantennas] Re: c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-06 02:06:14 UTC
From: kevin asato
Topic: 10012 Message: 10028

As requested. Not trying to be a smart-A but these are two that popped up readily.

http://antiquewireless.org/otb/dxxtal.htm
http://members.shaw.ca/ve7sl/crystal.html

If you notice the coil construction, there are a couple of techniques being used. One is a basketweave type construction and the other is the normal spiral wrap on a coil form. By not having the coils fixed in place as in the Twin Coil design, you can adjust the coupling between the coils to peak what you are trying to listen to. I suppose you could manage to alter the distance between coils on the Twin Coil design but then you would not be able to use the weather proof case for remote mounting! I suppose you can probably come up with similar results using separate loopstick antenna coils.

Makearadio.com has instructions on winding basketweave antenna coils, larger frame type coils, and spider coils.

73,
kevin
kc6pob

From: tmckee_k4zad <mckeetajc@earthlink.net>
To: loopantennas@yahoogroups.com
Sent: Friday, July 5, 2013 7:41 AM
Subject: [loopantennas] Re: c-crane dual coil antenna?

Kevin,

I would much appreciate it if you would supply links to a site or two where one can learn more about Xtal set builders use of multiple air-wound coils in the same plane.

Thanks,

Tom
K4ZAD

****

--- In loopantennas@yahoogroups.com, kevin asato <kc6pob@...> wrote:
>
> It's similar to what xtal radio developers have been using - multiple air-wound coils in the same plane to help increase sensitivity to their crystal sets. The use of the ferrite bar allows a reduction in the coil size. Difference is that the crystal sets do not fix the position of the coils to allow for fine tuning of signals. I do similar using a Terk Advantage coil with my portable radios. It works but it is not a miracle worker.
>
> 73,
> kevin

> kc6pob
>
>
>
> _____
> From: Don <stb55@...>
> To: loopantennas@yahoogroups.com
> Sent: Thursday, July 4, 2013 5:03 AM
> Subject: Re: [loopantennas] c-crane dual coil antenna?
>
>
>
> Â
> Hi Steve,
>
> Thanks! I did not know you did that investigation. I bought one a couple
> of years ago to hopefully improve the AM reception of my stereo in this
> metal can. The "twin-coil" was also about half price. Anyway, it did not
> help/improve reception in my case.
>
> Don KPC6NDB
> Upland, CA
> 34.10 -117.63 1250ft
> R-75 w/250Hz 2x R-71A w/250Hz R-70
> Perseus SDR-IQ FUNcube Dongle Pro+
> FRG-100B DX-1000 SR-AF & LPF
> DSP599zx MFJ-784B HD-1418 AF-1
> MSB-1 PA0RDT Mini-Whip x2 @ 20ft
> RYO Active Antenna @ 20ft
> LFL1010 ALA100L x2
>
> On 03-Jul-13 22:36, Steve Ratzlaff wrote:
> >
> >
> > This same topic came up several years ago. At that time I bought the
> > Twin Coil antenna and tore it apart and tested it extensively on the
> > bench. I used both the original twin coil then replaced it with a single
> > coil. In all tests, there was no significant difference, if any
> > differences at all, between the two configurations. And reading the
> > patent, there are glaring errors seemingly purposely inserted to try to
> > fool the unwary. It's a good antenna for its 7.5" ferrite rod size and
> > works well and I recommend it if one needs a 7.5" ferrite rod remotely
> > tunable antenna. But if you homebrew your own using a similar 7.5" rod
> > from Amidon, and the standard single coil, you'll get the same
> > performance. There is no magic at all in the use of "twin coils". If
> > anything, it appeared the technician on the factory production line
> > could more easily and quickly adjust the antenna for the proper tuning
> > range, compared to a single coil--perhaps that's the main reason why the
> > "twin coil" continues to be made.
> > 73,

> > Steve AA7U
> >
>

10029. Re: c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-06 13:01:53 UTC
From: tmckee_k4zad
Topic: 10012 Message: 10029

Kevin,

Many thanks. From your earlier message I assumed that you had more information about the Xtal set builders at hand than you did, and didn't realize that you would need to do a search to answer my request. This dumb-A could have done that. I appreciate your effort,and sorry for the trouble. The links are a great starting point.

Tom
K4ZAD

****

--- In loopantennas@yahoogroups.com, kevin asato <kc6pob@...> wrote:
>
> As requested. Not trying to be a smart-A but these are two that popped up readily.
>
> http://antiquewireless.org/otb/dxxtal.htm
> http://members.shaw.ca/ve7sl/crystal.html
>
>
> If you notice the coil construction, there are a couple of techniques being used. One is a basketweave type construction and the other is the normal spiral wrap on a coil form. By not having the coils fixed in place as in the Twin Coil design, you can adjust the coupling between the coils to peak what you are trying to listen to. I suppose you could manage to alter the distance between coils on the Twin Coil design but then you would not be able to use the weather proof case for remote mounting! I suppose you can probably come up with similar results using separate loopstick antenna coils.
>
>
> Makearadio.com has instructions on winding basketweave antenna coils, larger frame type coils, and spider coils.
>
> 73,
> kevin
> kc6pob
>
>
> _____
> From: tmckee_k4zad <mckeetajc@...>
> To: loopantennas@yahoogroups.com
> Sent: Friday, July 5, 2013 7:41 AM
> Subject: [loopantennas] Re: c-crane dual coil antenna?
>
>
>
> Â

> Kevin,
>
> I would much appreciate it if you would supply links to a site or two where one can learn more about Xtal set builders use of multiple air-wound coils in the same plane.
>
> Thanks,
>
> Tom
> K4ZAD

10030. Re: [loopantennas] Re: c-crane dual coil antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-06 16:40:38 UTC
From: kevin asato
Topic: 10012 Message: 10030

No Problem!
With work being so busy, things have been falling out of the bit bucket so I have had tendency lately to just refer to things off the web (with a reasonable sanity check). Saves on "now what file did I put that under ??" ! Those are a couple of sites, with included links that I refer to when trying to look up crystal sets and I don't mind sharing. I am going through those again as I am researching antenna coils to use for building a Tuned Radio Frequency (TRF) radio. I found a ZN414 TRF IC and trying to figure how I want to build the "front end" without buying a ferrite loopstick antenna. There are inherent weaknesses in the radio and chipset design and i also have to worry about a 50KW flamethrower 3 air miles away from me. The links also show how to build bandstop filters which will help attenuate, but not eliminate, the strong AM station (KNX-1070KHz).

73,
kevin
kc6pob

From: tmckee_k4zad <mckeetajc@earthlink.net>
To: loopantennas@yahoogroups.com
Sent: Saturday, July 6, 2013 6:01 AM
Subject: [loopantennas] Re: c-crane dual coil antenna?

Kevin,

Many thanks. From your earlier message I assumed that you had more information about the Xtal set builders at hand than you did, and didn't realize that you would need to do a search to answer my request. This dumb-A could have done that. I appreciate your effort,and sorry for the trouble. The links are a great starting point.

Tom
K4ZAD

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>
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use the weather proof case for remote mounting! I suppose you can probably come up with similar results using separate loopstick antenna coils.
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>
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> 73,
> kevin
> kc6pob
>
>
> _____
> From: tmckee_k4zad <mckeetajc@...>
> To: loopantennas@yahoogroups.com
> Sent: Friday, July 5, 2013 7:41 AM
> Subject: [loopantennas] Re: c-crane dual coil antenna?
>
>
>
> Â
> Kevin,
>
> I would much appreciate it if you would supply links to a site or two where one can learn more about Xtal set builders use of multiple air-wound coils in the same plane.
>
> Thanks,
>
> Tom
> K4ZAD

10031. B&O active antenna 10

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-07 17:10:04 UTC
From: timo
Topic: 10031 Message: 10031

There was an active antenna by B&O:

http://www.beoworld.org/prod_details.asp?pid=1003

http://radioakroatis.blogspot.fi/2011/04/dual-ferrite-lw-mw-active-antenna.html

Has anybody of you experiences with that item?

Greetings from Finland
---timo

10032. deformed delta loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-07 19:27:20 UTC
From: leblanccamloop
Topic: 10032 Message: 10032

Hi gang,

I just had a crazy idea and was wondering if anyone could comment on it. I have been looking into building a 60 foot by 22 foot delta loop for primarily LW/MW and from what I've been reading they tend to be good low noise antennas. However I don't need it to be directional and would prefer it to be more non directional. Here comes the crazy idea: Would it be possible to run half the loop in one direction and the other half about 90 degrees from that direction using the apex support point as the pivot point? What effect would this have on the antenna sensitivity, pattern and feed point impedance? The terminating resistor would therefore not be selected to give any deep nulls as this is what I don't want. Would the standard 1.2K ohms be a good starting pojnt or perhaps a bit lower in value? Any advise would be appreciated.

Thanks
Cam

10033. Re: [loopantennas] B&O active antenna 10

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-07 22:21:24 UTC
From: John Kolb
Topic: 10031 Message: 10033

The patent can be found at:
<http://www.google.com/patents/US4442434>

Photos
<http://radioakroatis.blogspot.fi/2011/04/dual-ferrite-lw-mw-active-antenna.html>

Very interesting

John

At 10:10 AM 7/7/2013, you wrote:
There was an active antenna by B&O:

http://www.beoworld.org/prod_details.asp?pid=1003

http://radioakroatis.blogspot.fi/2011/04/dual-ferrite-lw-mw-active-antenna.html

Has anybody of you experiences with that item?

Greetings from Finland
---timo

10034. Re: [loopantennas] deformed delta loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-07 22:33:52 UTC
From: Andrew Ikin
Topic: 10032 Message: 10034

Cam, wrote on July 7.

"Hi gang,

I just had a crazy idea and was wondering if anyone could comment on it. I have been looking into building a 60 foot by 22 foot delta loop for primarily LW/MW and from what I've been reading they tend to be good low noise antennas. However I don't need it to be directional and would prefer it to be more non directional. Here comes the crazy idea: Would it be possible to run half the loop in one direction and the other half about 90 degrees from that direction using the apex support point as the pivot point? What effect would this have on the antenna sensitivity, pattern and feed point impedance? The terminating resistor would therefore not be selected to give any deep nulls as this is what I don't want. Would the standard 1.2K ohms be a good starting pojnt or perhaps a bit lower in value? Any advise would be appreciated."

Cam, you will probably end-up with a pattern that where the null is slewed at 45 degrees. An omni-directional pattern is only possible with two orthogonal loops that are combined at 90 degrees. I would recommend that you stick to the normal Delta.

As a guess your loop will have an inductance of 70uH (1.7uH/m), thus the impedance will be approx. 70 Pi Ohms at 500kHz or 220 Ohms. So a simple 4:1 z Balun will do for the 50 Ohm Rx. Make the balun input centre tapped and connected to the feeder to maintain the loop is balanced to reduce the E Field response.

Another point try the keep the loop circumfrence no larger that 0.2 Lambda at the highest frequency.

Kind regards

Andrew Ikin

10035. Re: [loopantennas] deformed delta loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-07 22:36:23 UTC
From: Don
Topic: 10032 Message: 10035

Hi Cam.

I am a LW NDB Dxer. You will want directionality but it will somewhat broad in my experience anyway except for a few degrees around 90? to the plane of the antenna. I assume your length is 60ft on the ground. Why not make two 30 x 22ft 90? apart? If you are going to DX MW stations I would think you would want some directionality.

My ALA100L's are 30Lx12H (ft), 4ft off the ground rectangles 90? apart. I have 4 support masts but you could get by with 3. Use large diameter stranded wire like 14 or 12ga (US) or even large gauge twinlead or windowlead to increase the surface area of the wire (ends connected together). They could be lower but I have mine at 4ft to make it easier to cut the grass and what not.

I'd like to use 1/2in or 3/4in copper or aluminum tubing but it would probably get stolen and possibly become an eyesore to some neighbors. I painted the masts to match the house color and used black wire. Practically invisible from a distance.

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
R-75 w/250Hz 2x R-71A w/250Hz R-70
Perseus SDR-IQ FUNcube Dongle Pro+
FRG-100B DX-1000 SR-AF & LPF
DSP599zx MFJ-784B HD-1418 AF-1
MSB-1 PA0RDT Mini-Whip x2 @ 20ft
RYO Active Antenna @ 20ft
LFL1010 ALA100L x2

On 07-Jul-13 12:27, leblanccamloop wrote:
> Hi gang,
>
> I just had a crazy idea and was wondering if anyone could comment on it. I have been looking into building a 60 foot by 22 foot delta loop for primarily LW/MW and from what I've been reading they tend to be good low noise antennas. However I don't need it to be directional and would prefer it to be more non directional. Here comes the crazy idea: Would it be possible to run half the loop in one direction and the other half about 90 degrees from that direction using the apex support point as the pivot point? What effect would this have on the antenna sensitivity, pattern and feed point impedance? The terminating resistor would therefore
not be selected to give any deep nulls as this is what I don't want. Would the standard 1.2K ohms be a good starting pojnt or perhaps a bit

lower in value? Any advise would be appreciated.
>
> Thanks
> Cam
>
>
>

10036. Re: deformed delta loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-08 18:41:17 UTC
From: Camille LeBlanc
Topic: 10032 Message: 10036

Thanks Don and Andrew for your replies. You have both given me food for thought. I have recalculated my planning and I now think I will build a regular form delta 41 feet long by 18 feet high. This should reduce my old circumference from 134 feet (41m) to around 95.5 feet (29.1m). It would be built along the back fence and be feed from the ENE end therefore nulling the backside New England states. (I'm in SE New Brunswick, Canada) This should give me a better shot at TAs.

Andrew, I was intregued by the way you calculated the impedance. What formula did you use. I would like to recalculate my new design at various frequencies. I was also planning on rolling my own impedance transformer on a 100mm ferrite rod but from what I've read it is recommended to isolate both windings and not tap a single winding. (perhaps I misunderstood what you were telling me). I presume the smaller circumference would raise the feedpoint impedance from the 220 ohms you quoted me.

Thanks again gentlemen
Cam

10037. Re: [loopantennas] Re: deformed delta loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-09 12:03:39 UTC
From: Andrew Ikin
Topic: 10032 Message: 10037

Carmile, LeBlanc wrote on the 9th July,

"Andrew, I was intregued by the way you calculated the impedance. What formula did you use. I would like to recalculate my new design at various frequencies. I was also planning on rolling my own impedance transformer on a 100mm ferrite rod but from what I've read it is recommended to isolate both windings and not tap a single winding. (perhaps I misunderstood what you were telling me). I presume the smaller circumference would raise the feedpoint impedance from the 220 ohms you quoted me."

Carmile, generally speaking, 1m of thin wire has a measured inductance of 1.7uH. The Impedance is 2Pi F x L where 2Pi is 6.28, F MHz and L uH. Hence at 1MHz a 1uH inductor has a reactance of 6.28 Ohms. I would recommend that the transformer should be constructed using 10 turns turns trifilar 36 SWG (0.2mm) enamelled copper wound an a Fair-Rite twin hole core 2873000302. The antenna side is 2 x 10 turns in series, so you will have a centre tap. The receiver side is the other winding. Note; type 73 ferrite is conductive so you will need use 3mm nylon insulation sleeving in the core. Alternatively you could use Fair-Rite 28430000302 core, this has a much lower AL value (2uH per turn based on 10 turns) but it is non conductive. If you do end up using a Ferrite rod, then use isolated windings close to each other. Also the ferrite rod needs to housed in screened enclosure. It must be large enough so that the rod is several diameters from the metal work.

A smaller loop circumfrence will reduce the impedance.

Don mentioned the Wellbrook ALA100, this has been replaced by the ALA100LN. It has 8 Fets configured using Gate Source feedback, thus dynamically reducing the Fet Channel resistance and noise figure to a fraction of a dB with low IMD and high gain.

Kind regards

Andrew

10038. Delta Loop update

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-12 02:00:12 UTC
From: leblanccamloop
Topic: 10038 Message: 10038

Hello again,

Well Andrew and Don, I just finished building my broadband terminated delta loop this afternoon and all I can say is WOW!!!! This is one quiet antenna. I did a quick daytime frequency sweep with my R75 and I heard beacons and MW stations that I don't normally hear on my noisy
random wire antennas. I modelled it after an article written by Bruce Conti in the March 2013 edition of Popular Communications magazine. Matching transformer has 24 turn primary and 6.5 turn secondary on a ferrite rod. Feedline is RG6. Signal levels tend to be a bit lower than what I was expecting, necessitating the use of preamp 2 most of the time but the sheer quietness of this antenna more than makes up for the slightly lower levels. Eventually I will be phasing the loop against a contra-wound helical vertical inspired by Graham Maynard. But for now I will just enjoy it the way it is. I want to thank you both for your replies, insight and help on this matter and thanks also to Bruce for the excellent article.

Kindest regard
Cam

10039. Re: [loopantennas] Delta Loop update

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-12 12:33:05 UTC
From: clement F59465
Topic: 10038 Message: 10039

Hi,

Interesting your antenna..

Plan your antenna would be possible ?

Thank
F59465 Clem

2013/7/12 leblanccamloop <leblanccamloop@...>

> **
>
>
> Hello again,
>
> Well Andrew and Don, I just finished building my broadband terminated
> delta loop this afternoon and all I can say is WOW!!!! This is one quiet
> antenna. I did a quick daytime frequency sweep with my R75 and I heard
> beacons and MW stations that I don't normally hear on my noisy
> random wire antennas. I modelled it after an article written by Bruce
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> Matching transformer has 24 turn primary and 6.5 turn secondary on a
> ferrite rod. Feedline is RG6. Signal levels tend to be a bit lower than
> what I was expecting, necessitating the use of preamp 2 most of the time
> but the sheer quietness of this antenna more than makes up for the slightly
> lower levels. Eventually I will be phasing the loop against a contra-wound
> helical vertical inspired by Graham Maynard. But for now I will just enjoy
> it the way it is. I want to thank you both for your replies, insight and
> help on this matter and thanks also to Bruce for the excellent article.
>
> Kindest regard
> Cam
>
>
>

--

73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube <http://www.youtube.com/F59465swl>

10040. Re: [loopantennas] Delta Loop update

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-13 02:11:47 UTC
From: Camille LeBlanc
Topic: 10038 Message: 10040

Hi Clem,

I answered directly to you in French with your request.

Cam

10041. G4HOL horizontal loop aerials

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-17 15:22:58 UTC
From: john
Topic: 10041 Message: 10041

Hello Mike and Group

I am a member of Royal Signals Amateur Radio Club and have been reading the article in this July 2013 journal regarding G4HOL horizontal loop.
My query is the connection of 300 ohm slotted ribbon to an ATU. It states that one leg should go to the Antenna post and the other leg to the earth tag.

Does this mean using wire (A) from one end of the cable loop and wire (B) from the other end of the cable? Alternatively should the one end of the cable be short circuited across the two legs and the other end of the cable be used to connect to the ATU?

My other question (being new to loop antennas) is that a group exists dealing with Magnetic Loops. Are these loops completely different to your loops or would it be better to have just one group to include all types of loop antennas?

I must apologise for questions of this nature but my tendency is to know precisely how things are done.

Regards John 2E0KUF

10042. Re: G4HOL horizontal loop aerials

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-17 19:24:01 UTC
From: AlienRelics
Topic: 10041 Message: 10042

Loop antennas are magnetic loops, and magnetic loops are loop antennas. "Magnetic loop" just references the fact that a loop antenna is mainly sensitive to just the magnetic field and not the electric field of an incoming radio signal.

Sometimes people want a group revolving around a specific type of loop antenna, sometimes they don't understand that a "magnetic" loop is just a loop antenna, sometimes they don't like the moderator, sometimes they just don't search for a group before starting one, sometimes their group starts as a local club's group and expands. Sometimes a person wants to market their own loops or parts, and so starts up a group of their own. Sometimes a person is a little nutty and starts multiple groups, each covering slightly different antennas, just to be in charge of a lot of groups.

Steve Greenfield AE7HD

PS Full disclosure, I'm moderator of this group.

--- In loopantennas@yahoogroups.com, "john" <jinwood2@...> wrote:
>
> Hello Mike and Group
>
> I am a member of Royal Signals Amateur Radio Club and have been reading the article in this July 2013 journal regarding G4HOL horizontal loop.
> My query is the connection of 300 ohm slotted ribbon to an ATU. It states that one leg should go to the Antenna post and the other leg to the earth tag.
>
> Does this mean using wire (A) from one end of the cable loop and wire (B) from the other end of the cable? Alternatively should the one end of the cable be short circuited across the two legs and the other end of the cable be used to connect to the ATU?
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> My other question (being new to loop antennas) is that a group exists dealing with Magnetic Loops. Are these loops completely different to your loops or would it be better to have just one group to include all types of loop antennas?
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> I must apologise for questions of this nature but my tendency is to know precisely how things are done.
>
> Regards John 2E0KUF
>

10043. Re: [loopantennas] Re: G4HOL horizontal loop aerials

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-18 06:13:21 UTC
From: Stacy Williams
Topic: 10041 Message: 10043

Lol.....pmsl

I would say probably, they were very silly and just never checked for other groups:)

Regards & 73

Stacy
m0wsa

Spooky action at a distance.....
On Jul 17, 2013 8:24 PM, "AlienRelics" <alienrelics@...> wrote:

> **
>
>
> Loop antennas are magnetic loops, and magnetic loops are loop antennas.
> "Magnetic loop" just references the fact that a loop antenna is mainly
> sensitive to just the magnetic field and not the electric field of an
> incoming radio signal.
>
> Sometimes people want a group revolving around a specific type of loop
> antenna, sometimes they don't understand that a "magnetic" loop is just a
> loop antenna, sometimes they don't like the moderator, sometimes they just
> don't search for a group before starting one, sometimes their group starts
> as a local club's group and expands. Sometimes a person wants to market
> their own loops or parts, and so starts up a group of their own. Sometimes
> a person is a little nutty and starts multiple groups, each covering
> slightly different antennas, just to be in charge of a lot of groups.
>
> Steve Greenfield AE7HD
>
> PS Full disclosure, I'm moderator of this group.
>
> --- In loopantennas@yahoogroups.com, "john" <jinwood2@...> wrote:
> >
> > Hello Mike and Group
> >
> > I am a member of Royal Signals Amateur Radio Club and have been reading
> the article in this July 2013 journal regarding G4HOL horizontal loop.
> > My query is the connection of 300 ohm slotted ribbon to an ATU. It
> states that one leg should go to the Antenna post and the other leg to the
> earth tag.
> >
> > Does this mean using wire (A) from one end of the cable loop and wire
> (B) from the other end of the cable? Alternatively should the one end of

> the cable be short circuited across the two legs and the other end of the
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> >
> > My other question (being new to loop antennas) is that a group exists
> dealing with Magnetic Loops. Are these loops completely different to your
> loops or would it be better to have just one group to include all types of
> loop antennas?
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> precisely how things are done.
> >
> > Regards John 2E0KUF
> >
>
>
>

10044. Re: [loopantennas] Re: G4HOL horizontal loop aerials

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-18 08:59:29 UTC
From: jinwood2@sky.com
Topic: 10041 Message: 10044

Hello Steve

Thanks for the reply. It was only due to reading the Royal Signals article on horizontal loop antennas that led me to your Yahoo group. Up to then I didn't know it existed. I am a member of various groups relating to Ham radio and find them very useful. What I like about the groups is that every question that I have asked is answered in various ways and this has helped to grasp the technical jargon more easily.

Your answer to my question was both enlightening and amusing. I will endeavour to read the emails since joining your group

Regards John

From: AlienRelics <alienrelics@...>
To: loopantennas@yahoogroups.com
Sent: Wednesday, 17 July 2013, 20:24
Subject: [loopantennas] Re: G4HOL horizontal loop aerials

Loop antennas are magnetic loops, and magnetic loops are loop antennas. "Magnetic loop" just references the fact that a loop antenna is mainly sensitive to just the magnetic field and not the electric field of an incoming radio signal.

Sometimes people want a group revolving around a specific type of loop antenna, sometimes they don't understand that a "magnetic" loop is just a loop antenna, sometimes they don't like the moderator, sometimes they just don't search for a group before starting one, sometimes their group starts as a local club's group and expands. Sometimes a person wants to market their own loops or parts, and so starts up a group of their own. Sometimes a person is a little nutty and starts multiple groups, each covering slightly different antennas, just to be in charge of a lot of groups.

Steve Greenfield AE7HD

PS Full disclosure, I'm moderator of this group.

--- In mailto:loopantennas%40yahoogroups.com, "john" <jinwood2@...> wrote:
>
> Hello Mike and Group
>
> I am a member of Royal Signals Amateur Radio Club and have been reading the article in this July 2013 journal regarding G4HOL horizontal loop.
> My query is the connection of 300 ohm slotted ribbon to an ATU. It states that one leg should go to the Antenna post and the other leg to the earth tag.
>
> Does this mean using wire (A) from one end of the cable loop and wire (B) from the other end of the cable? Alternatively should the one end of the cable be short circuited across the two legs and the other end of the cable be used to connect to the ATU?

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> I must apologise for questions of this nature but my tendency is to know precisely how things are done.
>
> Regards John 2E0KUF
>

10045. Re: [loopantennas] G4HOL horizontal loop aerials

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-19 03:02:10 UTC
From: Andy
Topic: 10041 Message: 10045

In my opinion, a "Magnetic Loop" antenna is a distinct species and they are better left alone as a separate group. Contrary to the name, and contrary to intuition, a Magnetic Loop antenna is not one that generates only a magnetic field, or that is sensitive only to a magnetic field. It has even been shown that many Mag Loop antennas are actually the opposite, responding somewhat more greatly to the electric field than the magnetic field.

I believe the distinguishing feature of a Magnetic loop is one whose total circumference is much smaller than one wavelength ... perhaps no more than a tenth of a wavelength ... such that the current magnitude and phase around the loop is everywhere nearly the same. This is in contrast to "full size" loops, quad loops, delta loops, horizontal skyloops, and such, where the circumference is usually comparable to a wavelength, or longer. A consequence of this difference, is that a Mag Loop antenna has totally different radiation characteristics to a non-Mag Loop antenna. The directions of maximum radiation, and of the nulls, are reversed!

So even though a Magnetic Loop might be considered "just" a loop, I put to you that it isn't, and that it is best treated separately.

About your question about the connections, it's a little hard to tell what you mean, and I don't have access to the article. It doesn't make sense to connect wires from opposite ends of the feedline to the ATU and earth. Same end only.

Articles about the Skywire horizontal loop describe using it two ways:

On higher frequencies (most bands), keep the two ends of the loop separate.

On lower frequencies (usually meaning 160 meters), where the loop is too short to be an effective loop antenna, short the ends of the loop together, or the two wires of the feedline together, and drive it against earth. What you really have in this case is not a loop antenna anymore, but a vertical antenna (the feedline), with what was your "loop" acting as a capacity hat. It's a way of "cheating" ... getting an extra band out of that copper where it doesn't make a good loop antenna anymore.

Andy

10046. Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-19 15:04:05 UTC
From: Hilt
Topic: 10046 Message: 10046

The recommended circumference for a loop is 1 wavelength at the lowest frequency of use.
For a 40m (7.1Mhz) loop this equates to 30000000 / 7100000 (velocity of light in free space divided by frequency) which works out at 42.254m (138.63 ft)
The standard formula is 1005 / 7.1 = 141.55ft. This is around 3ft too long assuming a velocity factor of 1 in both cases.
I would appreciate any comments on the significant difference.

10047. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-20 02:34:55 UTC
From: Andy
Topic: 10046 Message: 10047

> I would appreciate any comments on the significant difference.
>

It just happens that a loop needs to be a few percent longer than 1.000 wavelength, to be resonant.

It's like a straight half-wavelength long resonant dipole. In theory, the length in feet ought to be 492/MHz. But the usual formula is 468/MHz. Why? Because of "end effect", because the wire isn't infinitesimally thin, because of wire insulation, because of ground proximity, and proximity to other objects nearby. Someone (an engineer at WBZ about 80 years ago) did experiments and found that an average of 5% short is about right ... and so we have 468/MHz. YMMV ... yours may need to be less or more than 468/MHz.

Likewise, the loop needs to be slightly longer than theory says.

Maybe it's because the E-M field takes shortcuts, going around the loop's circumference. Who knows? The point is, people who build loops find that they need to be cut slightly long, if you want them to be resonant.

The difference won't affect how it performs as an antenna. It is strictly a resonant frequency thing (i.e., SWR).

Regards,
Andy

10048. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-20 09:41:02 UTC
From: clement F59465
Topic: 10046 Message: 10048

Hi to all,

What formula for Metric ?

300/MHZ no ?

Regards
73 F59465

From France

2013/7/20 Andy <ai.egrps@...>

> **
>
>
>
> I would appreciate any comments on the significant difference.
>>
>
> It just happens that a loop needs to be a few percent longer than 1.000
> wavelength, to be resonant.
>
> It's like a straight half-wavelength long resonant dipole. In theory, the
> length in feet ought to be 492/MHz. But the usual formula is 468/MHz.
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> thin, because of wire insulation, because of ground proximity, and
> proximity to other objects nearby. Someone (an engineer at WBZ about 80
> years ago) did experiments and found that an average of 5% short is about
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> more than 468/MHz.
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> circumference. Who knows? The point is, people who build loops find that
> they need to be cut slightly long, if you want them to be resonant.
>
> The difference won't affect how it performs as an antenna. It is strictly
> a resonant frequency thing (i.e., SWR).
>
> Regards,
> Andy
>
>
>

>

--

73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube <http://www.youtube.com/F59465swl>

10049. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-20 11:31:48 UTC
From: Hylton Thompson
Topic: 10046 Message: 10049

Thank you Andy .... I greatly appreciate your considered response. What you say certainly makes sense to my ageing brain.

Another query that I would like to raise in here is the effect of balanced feeder on a loop's resonant frequency.

If 20 metres of of well-balanced window line is used as the feeder, 40 metres of conductor has effectively been added into the loop.

To my present understanding, the standing wave pattern around the loop must continue down each leg of the feeder which is therefore an integral part of the loop (but with radiation cancelled out).

If the loop and feeder each contain 40 metres of wire, is the combined resonant frequency based upon 80 metres of wire, even though 50% of it is non-radiating?

Taking this further, how reasonable is it to drop a few metres of window line, with its ends shorted, from some point in the loop and expect the loop to perform as if its length had been increased by double the length of the drop?

The reason I ask these questions is that I am in the process of putting up a small horizontal loop where the maximum circumference is restricted to about 32 metres and I want to achieve resonance at the bottom of the 40m band. Experiments show that my Palstar AT2K + 4:1 external balun can tune 6m thru 80m with a 32m loop so I don't know whether there will be a great advantage in trying to achieve 40m resonance by adding a non-radiating length to the loop.

Again, I will really appreciate any comments / advice.

10050. Willem Bos of RFSystems died

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-24 11:43:20 UTC
From: dx11
Topic: 10050 Message: 10050

Willem Bos, the designer and entrepreneur behind the well-known RF Systems antenna's passed away last Sunday.

Here is Jonathan Marks' blog about it.

http://criticaldistance.blogspot.nl/2013/07/willem-bos-rf-systems-rip.html

Cor Beijersbergen

10051. Greetings

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-07-26 11:53:53 UTC
From: Maxwell
Topic: 10051 Message: 10051

G'day all,
Have just joined the group. Am a child of the radio age.73yo. Had an interest in radio and loop antennas since teenage. Have tried various designs. Have 2 turn loop 6m x 2m hung under the garage eaves, supported by cup hooks screwed into those eaves.
Sensitive north/south. Receives radio traffic from Sydney to Hobart Yacht really well, you can almost smell the salt water hi hi. Regards to all. Max VK2TTI.

10052. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-01 12:07:34 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10052

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10053. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-01 12:07:34 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10053

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10054. Using loops in combinations.

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-01 10:16:01 UTC
From: Maxwell
Topic: 10054 Message: 10054

Most of us have tried loops singular. Has anyone tried loops in combination?
Have used a short length of plastic electric conduit with a ferrite rod held, coaxialy, in each end.
Wound a short coil on the outside of the conduit over each ferrite rod.
Connected the inner end of one coil to the outer end of the other coil, bought the left over ends together at a tuning capacitor.
Tunes ok, however the expected null occurs over only a few degrees of rotation and is very deep.
Conversely, the "acceptance angle" (whatever the opposite of null is) broadens.
Any comments, experience or help appreciated.

10055. Re: [loopantennas] Using loops in combinations.

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-03 06:20:18 UTC
From: Lionello Arosio Architetto
Topic: 10054 Message: 10055

Very interesting...

----- Original Message -----
From: Maxwell
To: loopantennas@yahoogroups.com
Sent: Thursday, August 01, 2013 12:16 PM
Subject: [loopantennas] Using loops in combinations.

Most of us have tried loops singular. Has anyone tried loops in combination?
Have used a short length of plastic electric conduit with a ferrite rod held, coaxialy, in each end.
Wound a short coil on the outside of the conduit over each ferrite rod.
Connected the inner end of one coil to the outer end of the other coil, bought the left over ends together at a tuning capacitor.
Tunes ok, however the expected null occurs over only a few degrees of rotation and is very deep.
Conversely, the "acceptance angle" (whatever the opposite of null is) broadens.
Any comments, experience or help appreciated.

10056. Lionellos comment

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-04 08:33:09 UTC
From: Maxwell
Topic: 10056 Message: 10056

Thank you Lionello for your comment. Loops can be used to block the reception of an unwanted station.If a radio/loop combination receives an unwanted station and a physicaly larger loop is interposed between the receiver/loop combination such that the unwanted signal is in the null of the "blocking loop" then when the "blocking loop" is tuned to the station it attenuates the offending signal.I believe that the "blocking loop" absorbs the signal and reradiates it in the plane of the "blocking loop" preventing the unwanted signal reaching the receiver/loop combination. Regards to all, Maxwell.

10057. Greentech Shielded Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-11 18:41:18 UTC
From: Everett
Topic: 10057 Message: 10057

Hey Guys,

Does anyone have any of the later articles that Brian Greer "Greertech" had on his web site before he took it down. I am looking for anything after "Coax Loop Antennas Operational Notes".

If anyone has this info please email it to me at everettsharp (at) Aol com

Thanks
73 Everett

10058. Re: Greentech Shielded Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-12 15:27:16 UTC
From: Tom McKee
Topic: 10057 Message: 10058

Everett,

If you have the old URL try: http://archive.org/web/web.php I have used it to recover stuff long gone from the web.

--
Tom McKee Twitter: @MacZad <https://twitter.com/MacZad>
==========
My Blog <http://www.maczads-musings.imradioha.org/> about things that matter.
Inland Marine Radio History <http://www.imradioha.org> GE Mobile Radio History <http://www.gemradioha.org>
Swing Music Broadcasts <http://swing-sked.wikispaces.com/> Joyce McKee's Art Gallery Page <http://www.fineartsleagueofcary.org/mckee.htm>

30 yrs of "Trickle Down" that didn't even drip & now the Plutocratic 1% push "Shared Sacrifice," and, timid us, we buy it.

.

10059. Re: [loopantennas] Re: Greentech Shielded Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-12 15:38:28 UTC
From: everettsharp@...
Topic: 10057 Message: 10059

Hi Tom,

Thanks for the info, yesterday someone else sent me that same site and I now have the info that I was looking for.

73 Everett

In a message dated 8/12/2013 10:31:40 A.M. Central Daylight Time, mckeetajc@earthlink.net writes:

Everett,

If you have the old URL try: http://archive.org/web/web.php I have used it to recover stuff long gone from the web.

--
Tom McKee Twitter: _@MacZad_ (https://twitter.com/MacZad)
==========
My _Blog_ (http://www.maczads-musings.imradioha.org/) about things that matter.
Inland Marine Radio History (http://www.imradioha.org/) _GE Mobile Radio History_ (http://www.gemradioha.org/) _Swing Music Broadcasts_ (http://swing-sked.wikispaces.com/) _Joyce McKee's Art Gallery Page_ (http://www.fineartsleagueofcary.org/mckee.htm)

30 yrs of "Trickle Down" that didn't even drip & now the Plutocratic 1% push "Shared Sacrifice," and, timid us, we buy it.

.

10060. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-12 20:29:07 UTC
From: Andy
Topic: 10046 Message: 10060

> What formula for Metric ?
>
> 300/MHZ no ?

That's the ideal formula for 1 wavelength in free space.

The "1005/MHz feet" loop formula is about 2% longer than 1 wavelength. The metric equivalent would be about 306/MHz meters.

Andy

10061. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-12 21:09:05 UTC
From: Andy
Topic: 10046 Message: 10061

> If 20 metres of of well-balanced window line is used as the feeder,
> 40 metres of conductor has effectively been added into the loop.

Hmm. Not really; not added INTO the loop.

> To my present understanding, the standing wave pattern around the loop
> must continue down each leg of the feeder which is therefore an integral
> part of the loop (but with radiation cancelled out).

Yeah, I don't think that's true. There really is a boundary between the loop and what feeds it.

Remember that if a transmission line is matched, then its length cannot be measured, or "felt", by "looking into" the end. It appears identical to an infinitely long line ... or to a resistor equal to the characteristic impedance Zo. So connecting a 20 meter long, 450 ohm balanced line is identical to connecting a 450 ohm resistor, to the same point. Also identical to connecting a 10000 meter balanced line.

The standing wave pattern on the antenna generally does not continue down the feedline. The presence of standing waves on the feedline depends on the impedance match at the feedline/antenna boundary. There could be no standing waves on the feedline ... even though they are there on the antenna.

It is the same as the feeder line connected to a dipole antenna, or a vertical. Neither one makes the antenna electrically longer.

> If the loop and feeder each contain 40 metres of wire, is the combined
> resonant frequency based upon 80 metres of wire, even though 50% of it
> is non-radiating?

No, sorry.

> Taking this further, how reasonable is it to drop a few metres of window
> line, with its ends shorted, from some point in the loop and expect the
> loop to perform as if its length had been increased by double the length
> of the drop?

Now this is something that actually does do something. The shorted stub behaves like an inductor (if the stub is less than 1/4 of a wavelength long at the transmitted frequency), and adding an inductor to a loop can make it appear electrically longer. It's just like a loading coil in a too-short vertical. You have to be a little careful with a loop antenna, because it does matter where in the loop you insert the stub (e.g., not at the current null points in the loop).

I am not sure if it behaves longer by twice the length of the stub. I suspect it goes by some other formula.

All I can say is, it's a concept I have read about, but don't know very much about. If I remember correctly, ON4UN talks about it in his book in the chapter on loops.

And it might confound things for using the loop on higher frequency harmonics.

> The reason I ask these questions is that I am in the process of putting
> up a small horizontal loop where the maximum circumference is restricted
> to about 32 metres and I want to achieve resonance at the bottom of the
> 40m band. Experiments show that my Palstar AT2K + 4:1 external balun
> can tune 6m thru 80m with a 32m loop so I don't know whether there will
> be a great advantage in trying to achieve 40m resonance by adding a
> non-radiating length to the loop.

Sometimes it helps to achieve resonance as near to the antenna itself, so that you don't have a poor SWR on the feeder line, adding to loss.

Andy

10062. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-12 23:04:00 UTC
From: Hylton Thompson
Topic: 10046 Message: 10062

Thank you for taking the trouble to explain this so clearly Andy. Your answers certainly make sense.

I guess that as the conductors in a ladder line feeder become further apart, there comes a point at which radiation will no longer cancel and it then starts to become an extension to the loop rather than a feeder.

Hylton Thompson (g6avl)

----- Original message -----
From: Andy <[1]ai.egrps@...>
To: [2]loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Loop Circumference
Date: Mon, 12 Aug 2013 17:09:05 -0400

> If 20 metres of of well-balanced window line is used as the feeder,
> 40 metres of conductor has effectively been added into the loop.

Hmm. Not really; not added INTO the loop.
> To my present understanding, the standing wave pattern around the loop
> must continue down each leg of the feeder which is therefore an integral
> part of the loop (but with radiation cancelled out).

Yeah, I don't think that's true. There really is a boundary between the loop and what feeds it.

Remember that if a transmission line is matched, then its length cannot be measured, or "felt", by "looking into" the end. It appears identical to an infinitely long line ... or to a resistor equal to the characteristic impedance Zo. So connecting a 20 meter long, 450 ohm balanced line is identical to connecting a 450 ohm resistor, to the same point. Also identical to connecting a 10000 meter balanced line.

The standing wave pattern on the antenna generally does not continue down the feedline. The presence of standing waves on the feedline depends on the impedance match at the feedline/antenna boundary. There could be no standing waves on the feedline ... even though they are there on the antenna.

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> resonant frequency based upon 80 metres of wire, even though 50% of

it
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No, sorry.

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window
> line, with its ends shorted, from some point in the loop and expect
the
> loop to perform as if its length had been increased by double the
length
> of the drop?

Now this is something that actually does do something. The shorted stub behaves like an inductor (if the stub is less than 1/4 of a wavelength long at the transmitted frequency), and adding an inductor to a loop can make it appear electrically longer. It's just like a loading coil in a too-short vertical. You have to be a little careful with a loop antenna, because it does matter where in the loop you insert the stub (e.g., not at the current null points in the loop).

I am not sure if it behaves longer by twice the length of the stub. I suspect it goes by some other formula.

All I can say is, it's a concept I have read about, but don't know very much about. If I remember correctly, ON4UN talks about it in his book in the chapter on loops.

And it might confound things for using the loop on higher frequency harmonics.

> The reason I ask these questions is that I am in the process of
putting
> up a small horizontal loop where the maximum circumference is
restricted
> to about 32 metres and I want to achieve resonance at the bottom of
the
> 40m band. Experiments show that my Palstar AT2K + 4:1 external balun
> can tune 6m thru 80m with a 32m loop so I don't know whether there
will
> be a great advantage in trying to achieve 40m resonance by adding a
> non-radiating length to the loop.

Sometimes it helps to achieve resonance as near to the antenna itself, so that you don't have a poor SWR on the feeder line, adding to loss.

Andy

References

1. mailto:ai.egrps@...
2. mailto:loopantennas@yahoogroups.com
3. http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJyZXBlMjc2BF9TAzk3MzU5NzE0BG

dycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDA2MQRzZWMDZnRyBHNsawNycGx5BHN0aW1l
AzEzNzYzNDE3ODY-?act=reply&messageNum=10061
4. mailto:ai.egrps@...?subject=Re%3A%20%5Bloopantennas%5D%20Loop%20Circumference
5. mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Loop%20Circumf
erence
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10063. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-13 03:22:55 UTC
From: Maxwell Mclellan
Topic: 10046 Message: 10063

Greetings all, Just thought re 450ohm line extending the output termination of a loop. If you consider the line as separate from the loop, the line possesses both inductance and most of all capacitance the parallel wires acting as the plates of a capacitor in parallel with, and tuning the loop hence a lower frequency. Theory is one thing, practice another. I hope this confuses the issue even more Hi Hi. Regards to all Max vk2tti.

Sent from my iPad

On 13/08/2013, at 9:04, Hylton Thompson <g6avl@...> wrote:

> Thank you for taking the trouble to explain this so clearly Andy. Your answers certainly make sense.
>
> I guess that as the conductors in a ladder line feeder become further apart, there comes a point at which radiation will no longer cancel and it then starts to become an extension to the loop rather than a feeder.
>
> Hylton Thompson (g6avl)
>
> ----- Original message -----
> From: Andy <ai.egrps@...>
> To: loopantennas@yahoogroups.com
> Subject: Re: [loopantennas] Loop Circumference
> Date: Mon, 12 Aug 2013 17:09:05 -0400
>
>
>
>
> > If 20 metres of of well-balanced window line is used as the feeder,
> > 40 metres of conductor has effectively been added into the loop.
>
> Hmm. Not really; not added INTO the loop.
>
> > To my present understanding, the standing wave pattern around the loop
> > must continue down each leg of the feeder which is therefore an integral
> > part of the loop (but with radiation cancelled out).
>
> Yeah, I don't think that's true. There really is a boundary between the loop and what feeds it.
>
> Remember that if a transmission line is matched, then its length cannot be measured, or "felt", by "looking into" the end. It appears identical to an infinitely long line ... or to a resistor equal to the characteristic impedance Zo. So connecting a 20 meter long, 450 ohm balanced line is identical to connecting a 450 ohm resistor, to the same point. Also identical to connecting a 10000 meter balanced line.
>

> The standing wave pattern on the antenna generally does not continue down the feedline. The presence of standing waves on the feedline depends on the impedance match at the feedline/antenna boundary. There could be no standing waves on the feedline ... even though they are there on the antenna.
>
> It is the same as the feeder line connected to a dipole antenna, or a vertical. Neither one makes the antenna electrically longer.
>
> > If the loop and feeder each contain 40 metres of wire, is the combined
> > resonant frequency based upon 80 metres of wire, even though 50% of it
> > is non-radiating?
>
> No, sorry.
>
> > Taking this further, how reasonable is it to drop a few metres of window
> > line, with its ends shorted, from some point in the loop and expect the
> > loop to perform as if its length had been increased by double the length
> > of the drop?
>
> Now this is something that actually does do something. The shorted stub behaves like an inductor (if the stub is less than 1/4 of a wavelength long at the transmitted frequency), and adding an inductor to a loop can make it appear electrically longer. It's just like a loading coil in a too-short vertical. You have to be a little careful with a loop antenna, because it does matter where in the loop you insert the stub (e.g., not at the current null points in the loop).
>
> I am not sure if it behaves longer by twice the length of the stub. I suspect it goes by some other formula.
>
> All I can say is, it's a concept I have read about, but don't know very much about. If I remember correctly, ON4UN talks about it in his book in the chapter on loops.
>
> And it might confound things for using the loop on higher frequency harmonics.
>
> > The reason I ask these questions is that I am in the process of putting
> > up a small horizontal loop where the maximum circumference is restricted
> > to about 32 metres and I want to achieve resonance at the bottom of the
> > 40m band. Experiments show that my Palstar AT2K + 4:1 external balun
> > can tune 6m thru 80m with a 32m loop so I don't know whether there will
> > be a great advantage in trying to achieve 40m resonance by adding a
> > non-radiating length to the loop.
>
> Sometimes it helps to achieve resonance as near to the antenna itself, so that you don't have a poor SWR on the feeder line, adding to loss.
>
> Andy
>
>
>
>

>
>

10064. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-14 01:41:05 UTC
From: Andy
Topic: 10046 Message: 10064

> I guess that as the conductors in a ladder line feeder become further
> apart, there comes a point at which radiation will no longer cancel and
> it then starts to become an extension to the loop rather than a feeder.

Yes, I think that is true. But the way in which it becomes an extension to the loop may be complicated.

With normal ladder line, you get near-cancellation. It is not perfect cancellation, but it is so close, that you can pretty much ignore the small amount that does radiate. As you separate the conductors, the cancellation probably becomes less perfect. But separating the wires also changes the impedance, and changes the electric and magnetic fields surrounding the wires, so it might be more complicated than just saying that it "radiates more."

Some powerful radio stations still use open wire feeders to their antennas. For high power radio stations, the wire separation needs to be moderately large (a foot or more), so that arcing doesn't happen between the wires, on account of the high voltages required for megawatt power levels. Some stations even use multiple wires arranged in a kind of open coaxial arrangement, with one wire (or a close grouping of wires) as the center conductor, surrounded by a "cage" of a half dozen or more wires acting as the coax shield. Looking at it, it's amazing to think that it actually works, and it works quite well.

Andy

10065. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-14 03:30:13 UTC
From: Hylton Thompson
Topic: 10046 Message: 10065

Thanks yet again Andy.

My horizontal quad loop is used multi-band. It is fed by about 10m of 450 ohm windowline, via a 4:1 balun (at rig) and an ATU but, due to limited available space, I cannot get a full 40m loop up in a reasonable shape - 32m is my max and that is all I am usiing right now. It is on 4 fibreglass poles 8.5m above ground at the east end (house) and 6.5m at the west end. It is corner-fed at the east end.

The internal ATU of my IC-7700 copes well from 6 to 20m but "draws the line" at 40m where the antenna is mainly reactive. I use an external ATU for 40m and it can also tune 80m (Palstar AT2K).

I want to add a 12m "tuck" midway down the north leg of the loop above a wooden out building and propose dropping it in a delta shaped loop with the base being supported about a foot above the roof of the out building.

I realise that the "tuck" will perform nothing like a resonant delta loop at any frequency I will use, but it is a convenient shape and I think it will provide useful radiation.

I would welcome any comments before I commence the work.

Hylton Thompson (g6avl)

----- Original message -----
From: Andy <[1]ai.egrps@...>
To: [2]loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Loop Circumference
Date: Tue, 13 Aug 2013 21:41:05 -0400

> I guess that as the conductors in a ladder line feeder become further
> apart, there comes a point at which radiation will no longer cancel
and
> it then starts to become an extension to the loop rather than a
feeder.
Yes, I think that is true. But the way in which it becomes an
extension to the loop may be complicated.

With normal ladder line, you get near-cancellation. It is not perfect cancellation, but it is so close, that you can pretty much ignore the small amount that does radiate. As you separate the conductors, the cancellation probably becomes less perfect. But separating the wires also changes the impedance, and changes the electric and magnetic fields surrounding the wires, so it might be more complicated than just saying that it "radiates more."

Some powerful radio stations still use open wire feeders to their antennas. For high power radio stations, the wire separation needs to be moderately large (a foot or more), so that arcing doesn't happen between the wires, on account of the high voltages required for megawatt power levels. Some stations even use multiple wires arranged in a kind of open coaxial arrangement, with one wire (or a close grouping of wires) as the center conductor, surrounded by a "cage" of a half dozen or more wires acting as the coax shield. Looking at it, it's amazing to think that it actually works, and it works quite well.

Andy

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10066. Re: [loopantennas] Loop Circumference

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-16 00:56:19 UTC
From: Andy
Topic: 10046 Message: 10066

> I want to add a 12m "tuck" midway down the north leg of the loop ...

> I would welcome any comments before I commence the work.

As I say, no experience here with that. But according to ON4UN's book, adding inductance at a current null point (1/4 or 3/4 of the way around the loop) doesn't help the SWR.

I wonder if you can 'meander' the loop wire, to fit more wire in to the available real estate. They say it works well with dipoles.

Andy

10067. Loop around a rancher house

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-18 19:00:29 UTC
From: Ron Polityka
Topic: 10067 Message: 10067

Hello,

I am new to this list and I have been spending the past few days looking at all the articles and e-mails on-line.

I recently purchased a Johnson Viking 250w Match Box. I would like to place a loop around the rancher house that I live in but not really sure on if it would work. The house measures 70' x 30' with the roof line up about 14' in the front and 20' in the back from the ground. I could extend the length to about 110'. I have 450 ohm ladder line that I can run directly out of the match box to the antenna.

Any suggestions?

Thanks for the band width and any help that I would receive.

73 and Thanks,
Ron Polityka
WB3AAL

10068. Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 18:18:57 UTC
From: Everett
Topic: 10068 Message: 10068

Hi Chris,

I just saw and read your article "Mastering the Art of Shielded Loop Aerials" and of particular interest was the part on the Mobius configured shielded loop. I have been experimenting with shielded loops now for about 2 months, or so. I have been experimenting with a active loop, as apposed to a passive tuned loop. I was never able to get it working to my satisfaction with the standard shielded loop. However, when I started experimenting with the Mobius configuration I started seeming some very good results.

I am working with a 1 meter diameter loop using PEX water pipe for the loop support and I made my own coax using 1/4"OD Poly water pipe used for ice maker water line. The shield was remover from some old RG58 coax and slipped over the plastic tubing. The wire inside of the tubing is 660/46 Litz wire. I put two layers of shrink tubing over the joint at the top to give it some strength where I made the connections of the Litz wire to the shields. At the bottom I connected the two shield ends together and each of the two Litz wires are connected to a M0YAF Broad band amplifier.(Note: the home made coax was slid inside of the PEX water pipe)

I have been comparing the Mobius loop to a active loop that is of the same size using the same M0YAF amp.On 75 meters I get about a 5 S unit higher signal then my standard active loop, using the same broadband amplifier, and about 4 to 5 S units lower noise. One 40 meters the S meter readings are a little lower then the standard active loop, but again the noise floor is lower. On both bands I am able to get good rotational nulls. On 20 meters its performance is a little below the standard active loop. I am seeing equal nulls 180 deg from each other on all bands.

Yesterday I replaced my home made coax with RG11 and it is a little better on the higher bands, now working as well my active loop on signal strengths on 20 meters and it has some directivity when rotating the loop, but blows it away my standard active loop on 75 meters and down, with both signal strength and a lower noise floor. 160 meter has been dead here, so I have not been able to check it out

I also compared the Mobius loop to a tuned loop that I made a while back, that is of the same size (1 meter) and the Mobius loop was a whole lot better in both signal strength and much lower noise on all bands, and blew it away on 75 meters and 40 meters.

So at this point I know that it works well from about 200 KHz to 20 MHz. The band has been crap above 20 MHz, so I just don't know how it will work above 20 MHz. However, when the 20 MHz and above comes to life I will find out.

On this last Saturday I pick up a 50' roll of 1/2" diameter, 50 ohm Heliax coax for $10, that was my best deal of the day. The shield is copper and the center conductor is copper, about 3/16" in diameter. this will become a RX loop sometime, but I am thinking of something larger than 1 meter and it will be the mobius configuration. If anyone has any ideas on what size,with in reason, don't hold back.

So my question is have you made any more experiments with the Mobuis project that is mentioned in your article?

73 Everett N8CNP

10069. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 19:12:48 UTC
From: Steve
Topic: 10068 Message: 10069

>....the Mobius loop .....I get about a 5 S unit higher signal ... and
>about 4 to 5 S units lower noise.

Everett...have you identified what this noise is? Is it 'sky noise / atmospherics' or local electrical noise?

Steve

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10070. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 19:46:42 UTC
From: everettsharp@...
Topic: 10068 Message: 10070

Hi Steve,

It is more local man made noise, but some of it is no doubt atmospheric noise. However, if the atmospheric noise is coming from all directions you can't null it out. I am quite impressed with how well it works and there is no tuning, just give it a turn every now and then. For what ever reason, it seams to have more gain and a lower noise floor on 75 and 40 meters that a active loop the same diameter, which is using the same amplifier, but 14 gage wire rather than coax.

Everett

In a message dated 8/19/2013 2:14:14 P.M. Central Daylight Time, ve7sl@... writes:

>....the Mobius loop .....I get about a 5 S unit higher signal ... and
>about 4 to 5 S units lower noise.

Everett...have you identified what this noise is? Is it 'sky noise / atmospherics' or local electrical noise?

Steve

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10071. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 19:51:36 UTC
From: Andrew Ikin
Topic: 10068 Message: 10071

Dear Everett,

Thanks for sharing your obsevations. I would suggest that the difference you are seing in loop performace comes down to how well the loops are matched to the ampfiliers and whether you are using a balanced amplifer to cancel out any near E field noise. All the mobius loop is doing is increasing the loops impedance. This could be have been achieved with a transformer.

Some time ago I compared a Mobius loop (1m diam) to a 1m 3/4 tube loop using an ALA1530 Amplifier and a higher impedance low noise FET amplifier. What I found was; below approx. 16MHz both loop types would provide similar performance when taking into consideration the differing loop z to amplifier input z.

Above 16MHz the capacitance of the Mobius loop was too high and thus the gain drops off. Where both loop types have a resonable match to the amplifier the signal and s/n are the same.

If one looks at the two loop types intuatively, both have the same area, so it would be fair to say that they capture the same signal. With the mobuis the deliverable current to the amplifier is 4 x lower because the impedance is 4 x higher. Hence this is why Pixel use a 50 ohm input z amplifier to acheive good results compared to some designs using a near zero input impedance. The basic fallacy with using a near zero input z amplifier is that a loop is not a low z current source, but a current source with a series reactance. It is this rising reactance verses frequency which dominates the loss in a broadband loop antenna, hence the need to provide a reasonable loop/amplifier match.

73

Andrew Ikin

10072. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 21:06:06 UTC
From: Steve
Topic: 10068 Message: 10072

FB Everett...I'm surprised to hear that the atmospherics are lower as this 'noise' is usually treated as a signal, unlike some forms of near-field noise. When I rebuilt my 10' active loop, I had consdered doing a Mobius strip but then talked myself out of it as I reasoned that the theoretical doubling of output signal voltage might cause some undesired affects on the preamp's front end as I live less than a mile from the 'AP' ndb on 378 KHz. As well, it seemed to me that by physically connecting the shield to the inner element of the loop, that the 'shielded' loop would simply become a two-turn (unshielded) loop. Your results are of particular interest and I may yet do some further experimenting with the next re-build should the 10 footer eventually come down in one of our winter storms.

If you have not seen it before, the details of my LF shielded system are here:

http://members.shaw.ca/ve7sl/burhans.html

Steve / 73

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10073. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 21:50:57 UTC
From: crabtreejr@...
Topic: 10068 Message: 10073

Hello Andy

Your comment that the loop is a current source with a series reactance is interesting.

My understanding, is that a small loop can be considered as a voltage source in series with the inductance of the loop, the ohmic losses, and the negligle radiation resistance. For a given field strength, the voltage output is proportional to frequency. The equivalent current source has an output which is proportional to field strength only, and has a shunt, not series, inductance.

What am I missing?

Tnx and 73

John KC0G

In a message dated 8/19/2013 2:55:26 PM Central Daylight Time, andrew.ikin@... writes:
> Dear Everett,
>
> Thanks for sharing your obsevations. I would suggest that the difference
> you are seing in loop performace comes down to how well the loops are
> matched to the ampfiliers and whether you are using a balanced amplifer to cancel
> out any near E field noise. All the mobius loop is doing is increasing the
> loops impedance. This could be have been achieved with a transformer.
>
> Some time ago I compared a Mobius loop (1m diam) to a 1m 3/4 tube loop
> using an ALA1530 Amplifier and a higher impedance low noise FET amplifier.
> What I found was; below approx. 16MHz both loop types would provide similar
> performance when taking into consideration the differing loop z to amplifier
> input z.
>
> Above 16MHz the capacitance of the Mobius loop was too high and thus the
> gain drops off. Where both loop types have a resonable match to the
> amplifier the signal and s/n are the same.
>
> If one looks at the two loop types intuatively, both have the same area,
> so it would be fair to say that they capture the same signal. With the
> mobuis the deliverable current to the amplifier is 4 x lower because the
> impedance is 4 x higher. Hence this is why Pixel use a 50 ohm input z amplifier
> to acheive good results compared to some designs using a near zero input
> impedance. The basic fallacy with using a near zero input z amplifier is
> that a loop is not a low z current source, but a current source with a series
> reactance. It is this rising reactance verses frequency which dominates the

> loss in a broadband loop antenna, hence the need to provide a reasonable
> loop/amplifier match.
>
> 73
> Andrew Ikin
>

10074. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 21:53:31 UTC
From: Chris Trask
Topic: 10068 Message: 10074

<<SNIP>>

>
>So my question is have you made any more experiments with the Mobuis project that is mentioned in your article?
>

I'm not surprised at the results you've seen. With twice the output voltage and four times the terminal impedance, your improved S readings are right on track.

No, I haven't pursued the Mobius Shielded Loop any further. I do want to use it in an experiment for an indoor antenna with varaactor tuning and a tunnel diode negative resistance amplifier/Q-multiplier.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10075. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 21:57:20 UTC
From: Chris Trask
Topic: 10068 Message: 10075

>
>Your comment that the loop is a current source with a series reactance is
>interesting.
>
>My understanding, is that a small loop can be considered as a voltage
>source in series with the inductance of the loop, the ohmic losses, and the
>negligle radiation resistance. For a given field strength, the voltage output is
>proportional to frequency. The equivalent current source has an output
>which is proportional to field strength only, and has a shunt, not series,
>inductance.
>
>What am I missing?
>

I was looking at loops as being voltage sources with series reactances until I came across a paper that look at them as being current sources with shunt reactances, and it made sense as a loop in a magnetic field generates a current to the load that is proportional to the loop diameter and the signal frequency. That ptomted me to design my wideband loop amplifier with a very low input impedance rather than trying to match the loop reactance over a wide band.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10076. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 22:23:39 UTC
From: everettsharp@...
Topic: 10068 Message: 10076

Hi Andrew,

Thank you for your comments and you input. I tried several different hook ups with the standard shielded loop configuration and even tried a matching transformer using one of the 73 mix binocular cores, with several different ratios, but was never able to get it to work just right. I could not get the loop balanced correctly, as my 180 nulls were no where the same. Maybe I just did not come up with the correct combination.

However, with the Mobius configuration it worked from the get go, with the M0YAF amp, of which I built 4 of them. I also tried the LZ1AQ broadband amp, but it did not work very well on any of the shielded loop configurations, but did okay on the standard 14 gage wire loop.

Your observation on the lower performance above about 16 MHz is very similar to what I am seeing, but as I have moved up from first, from RG58, then to my home made coax and now to the RG11, I am seeing improvement. The RG 58 has a capacitance of around 30 pf per foot, I did not measure my home made coax and the RG11 runs about 20 pf per foot, so again in your remarks on the capacitance maybe what is degrading my top end performance.

73 Everett

In a message dated 8/19/2013 2:55:40 P.M. Central Daylight Time, andrew.ikin@... writes:

Dear Everett,
Thanks for sharing your observations. I would suggest that the difference you are seeing in loop performace comes down to how well the loops are matched to the ampfiliers and whether you are using a balanced amplifer to cancel out any near E field noise. All the mobius loop is doing is increasing the loops impedance. This could be have been achieved with a transformer.
Some time ago I compared a Mobius loop (1m diam) to a 1m 3/4 tube loop using an ALA1530 Amplifier and a higher impedance low noise FET amplifier.
What I found was; below approx. 16MHz both loop types would provide similar performance when taking into consideration the differing loop z to amplifier input z.
Above 16MHz the capacitance of the Mobius loop was too high and thus the gain drops off. Where both loop types have a resonable match to the amplifier the signal and s/n are the same.
If one looks at the two loop types intuatively, both have the same area, so it would be fair to say that they capture the same signal. With the mobuis the deliverable current to the amplifier is 4 x lower because the impedance is 4 x higher. Hence this is why Pixel use a 50 ohm input z amplifier to acheive good results compared to some designs using a near zero input impedance. The basic fallacy with using a near zero input z amplifier is

that a loop is not a low z current source, but a current source with a series reactance. It is this rising reactance verses frequency which dominates the loss in a broadband loop antenna, hence the need to provide a reasonable loop/amplifier match.
73
Andrew Ikin

10077. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 23:07:28 UTC
From: everettsharp@...
Topic: 10068 Message: 10077

Hello Again Steve,

Yes I did look at your site and had seen it before, that is quite a loop that you have. I also noticed all of of your projects and old radio/electronic collectable's, very nice.

I just did some rechecking on 2 local AM radio stations, using the Mobius Loop connected to the M0YAO broadband loop, using a Icom R 75 receiver. One station at 690 KHz gave a S meter reading of 20/9, I was able to null it to S9. The other station was 30/9 and I was able to null it to 10/9. So both stations were nulled by 20 S units, it does not seem correct, but that is 120 dB. The nulls were identical 180 deg from each other.

However, as I go up in frequency the nulls become of a lesser magnitude (more sky wave and less ground wave). Also the lower noise floor is more noticeable on the lower bands. What I mean is when switching back and forth from the active 1 meter wire loop to the active 1 meter mobius loop is that I see a wider spread between the ambient noise, lower S meter readings and higher S meter readings with signal, which is easy to see on 75 meters, but much more difficult to see on MW BCB, all though I am sure it is same there also.

Before you make any changes try experimenting with a smaller loop, like maybe a 1 meter, to see if you see what I am seeing. I have not done the kind of comparison that Andy did, comparing it to a standard Shielded loop, as I only compared mine to a active wire loop and a tuned wire loop.

73 Everett N8CNP

In a message dated 8/19/2013 4:06:41 P.M. Central Daylight Time, ve7sl@... writes:

FB Everett...I'm surprised to hear that the atmospherics are lower as this 'noise' is usually treated as a signal, unlike some forms of near-field noise. When I rebuilt my 10' active loop, I had consdered doing a Mobius strip but then talked myself out of it as I reasoned that the theoretical doubling of output signal voltage might cause some undesired affects on the
preamp's front end as I live less than a mile from the 'AP' ndb on 378 KHz.
As well, it seemed to me that by physically connecting the shield to the inner element of the loop, that the 'shielded' loop would simply become a two-turn (unshielded) loop. Your results are of particular interest and I may yet do some further experimenting with the next re-build should the 10 footer eventually come down in one of our winter storms.

If you have not seen it before, the details of my LF shielded system are here:

http://members.shaw.ca/ve7sl/burhans.html

Steve / 73

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10078. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-19 23:14:23 UTC
From: Steve
Topic: 10068 Message: 10078

Comments all noted Everett...thanks again...BTW..

>The other station was 30/9 and I was able to null it to 10/9. So both stations were nulled by 20 S units, it does not seem correct, but that is 120 dB.

not 20 S-units but ~ 20db

Steve / 73

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10079. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 09:57:39 UTC
From: Andrew Ikin
Topic: 10068 Message: 10079

John wrote on August 19,

Your comment that the loop is a current source with a series reactance is interesting.

My understanding, is that a small loop can be considered as a voltage source in series with the inductance of the loop, the ohmic losses, and the negligle radiation resistance. For a given field strength, the voltage output is proportional to frequency. The equivalent current source has an output which is proportional to field strength only, and has a shunt, not series, inductance.

What am I missing?

Tnx and 73

John KC0G

Hi John,

What I believe is happening; the H Field induces a current into loop, this current is not frequency related. However, as the loop has a rising series impedance with frequency the loops terminal voltage is the product the induce current x the impedance. Hence we see that the Vout is proportional to frequency.

This issue of the loops series reactance impeding the current is discussed in a GB patent for the Liniplex loop manufactured by Phase Track in the early nineties. I can't find my copy of this patent. A search for patents by Charles Edward Forster my find it. The Liniplex loop used multiple loops in parallel to reduce the series reactance from impeding the current to the amplifier.

Getting back to the real issue here, we have a loop with output z that is frequency dependant, therefore optimum power transfer to the amplifier will only happen when the amplifier input z matches the loop.

Kind regards

Andrew

10080. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 10:05:31 UTC
From: Andrew Ikin
Topic: 10068 Message: 10080

Everett wrote on the 19 August,

Hi Andrew,

Thank you for your comments and you input. I tried several different hook ups with the standard shielded loop configuration and even tried a matching transformer using one of the 73 mix binocular cores, with several different ratios, but was never able to get it to work just right. I could not get the loop balanced correctly, as my 180 nulls were no where the same. Maybe I just did not come up with the correct combination.

However, with the Mobius configuration it worked from the get go, with the M0YAF amp, of which I built 4 of them. I also tried the LZ1AQ broadband amp, but it did not work very well on any of the shielded loop configurations, but did okay on the standard 14 gage wire loop.

Your observation on the lower performance above about 16 MHz is very similar to what I am seeing, but as I have moved up from first, from RG58, then to my home made coax and now to the RG11, I am seeing improvement. The RG 58 has a capacitance of around 30 pf per foot, I did not measure my home made coax and the RG11 runs about 20 pf per foot, so again in your remarks on the capacitance maybe what is degrading my top end performance.

Hello Everett,

The LZ1AQ amp. has a very low input z. That is why it does not work with the higher z Mobius.

73

Andrew

10081. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 10:46:48 UTC
From: Hylton Thompson
Topic: 10068 Message: 10081

In general, any voltage source with series impedance can be converted to an exactly equivalent current source with parallel impedance at the same frequency. The only constraint is that there must be no non-linear devices such as diodes in the the circuit. See Thevenin's and Norton's theorems.

Hylton Thompson (g6avl)

----- Original message -----
From: Andrew Ikin <[1]andrew.ikin@...>
To: [2]loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Mobius Shielded Loop Antenna
Date: Tue, 20 Aug 2013 10:57:39 +0100

John wrote on August 19,

Your comment that the loop is a current source with a series reactance is interesting.
My understanding, is that a small loop can be considered as a voltage source in series with the inductance of the loop, the ohmic losses, and the negligle radiation resistance. For a given field strength, the voltage output is proportional to frequency. The equivalent current source has an output which is proportional to field strength only, and has a shunt, not series, inductance.
What am I missing?
Tnx and 73
John KC0G

Hi John,

What I believe is happening; the H Field induces a current into loop, this current is not frequency related. However, as the loop has a rising series impedance with frequency the loops terminal voltage is the product the induce current x the impedance. Hence we see that the Vout is proportional to frequency.

This issue of the loops series reactance impeding the current is discussed in a GB patent for the Liniplex loop manufactured by Phase Track in the early nineties. I can't find my copy of this patent. A search for patents by Charles Edward Forster my find it. The Liniplex loop used multiple loops in parallel to reduce the series reactance from impeding the current to the amplifier.

Getting back to the real issue here, we have a loop with output z that is frequency dependant, therefore optimum power transfer to the amplifier will only happen when the amplifier input z matches the loop.

Kind regards

Andrew

References

1. mailto:andrew.ikin@...
2. mailto:loopantennas@yahoogroups.com
3. http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJyaWYxbzAyBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDA3OQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzEzNzY5OTI2Njk-?act=reply&messageNum=10079
4. mailto:andrew.ikin@...?subject=Re%3A%20%5Bloopantennas%5D%20Mobius%20Shielded%20Loop%20Antenna
5. mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Mobius%20Shielded%20Loop%20Antenna
6. http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJmcGZ2MjBsBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzEzNzY5OTI2Njk-
7. http://groups.yahoo.com/group/loopantennas/message/10068;_ylc=X3oDMTM3MGtxa29tBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDA3OQRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzEzNzY5OTI2NjkEdHBjSWQDMTAwNjg-
8. http://groups.yahoo.com/group/loopantennas/members;_ylc=X3oDMTJnaGdudDZ1BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxMzc2OTkyNjY5?o=6
9. http://groups.yahoo.com/group/loopantennas;_ylc=X3oDMTJmZDllbzRuBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzEzNzY5OTI2Njk-
10. http://groups.yahoo.com/group/loopantennas/links
11. http://groups.yahoo.com/group/loopantennas/files
12. http://ph.groups.yahoo.com/group/loopantennas/photos
13. http://groups.yahoo.com/;_ylc=X3oDMTJlYm40cTczBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTM3Njk5MjY2OQ--
14. mailto:loopantennas-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Traditional
15. mailto:loopantennas-digest@...m?subject=Email%20Delivery:%20Digest
16. mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
17. http://docs.yahoo.com/info/terms/
18. mailto:ygroupsnotifications@yahoogroups.com?subject=Feedback%20on%20the%20redesigned%20individual%20mail%20v1

10082. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 10:49:16 UTC
From: Andrew Ikin
Topic: 10068 Message: 10082

John wrote on August 19,

Your comment that the loop is a current source with a series reactance is interesting.

My understanding, is that a small loop can be considered as a voltage source in series with the inductance of the loop, the ohmic losses, and the negligle radiation resistance. For a given field strength, the voltage output is proportional to frequency. The equivalent current source has an output which is proportional to field strength only, and has a shunt, not series, inductance.

What am I missing?

Tnx and 73

John KC0G

Hi John,

What I believe is happening; the H Field induces a current into loop, this current is not frequency related. However, as the loop has a rising series impedance with frequency the loops terminal voltage is the product the induce current x the impedance. Hence we see that the Vout is proportional to frequency.

This issue of the loops series reactance impeding the current is discussed in a GB patent for the Liniplex loop manufactured by Phase Track in the early nineties. I can't find my copy of this patent. A search for patents by Charles Edward Forster my find it. The Liniplex loop used multiple loops in parallel to reduce the series reactance from impeding the current to the amplifier.

Getting back to the real issue here, we have a loop with output z that is frequency dependant, therefore optimum power transfer to the amplifier will only happen when the amplifier input z matches the loop.

Kind regards

Andrew

10083. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 12:13:53 UTC
From: Jack Smith
Topic: 10068 Message: 10083

John and Andrew are both correct.

If modeled as a voltage source in series with inductance, you will find the output voltage into a resistive load is independent of frequency above a certain threshold, just as with the parallel current source model.

This is because the loop voltage source EMF increases linearly with frequency at 6 dB/octave (induced voltage is proportional to rate of change of the magnetic flux, so when you differentiate the sin(wt) the flux rate of change becomes -w*cos(wt)) and voltage divider formed by the loop's inductive reactance (which doubles per octave) in series with the amplifier input resistance decreases the signal at the amplifier input at the same 6 dB/octave if the frequency is sufficiently high such that the amplifier input impedance is much less than the inductive reactance of the loop. In other words, the 6 dB/octave rising voltage output is canceled by the -6 dB/octave voltage divider effect and the net voltage input into the loop amplifier is constant with frequency.

This series model predicts the same behavior as a parallel current source, so either may be used provided you take care to get the maths correct.

The simplistic -6 dB/octave LR voltage divider assumes, as mentioned earlier, that the loop's inductive reactance is large compared with the input impedance of the amplifier.

Jack K8ZOA

On 8/20/2013 6:49 AM, Andrew Ikin wrote:
>
> John wrote on August 19,
>
> Your comment that the loop is a current source with a series reactance
> is interesting.
>
> My understanding, is that a small loop can be considered as a voltage
> source in series with the inductance of the loop, the ohmic losses,
> and the negligle radiation resistance. For a given field strength,
> the voltage output is proportional to frequency. The equivalent
> current source has an output which is proportional to field strength
> only, and has a shunt, not series, inductance.
>
> What am I missing?
>
> Tnx and 73
>

> John KC0G
>
> Hi John,
>
> What I believe is happening; the H Field induces a current into loop,
> this current is not frequency related. However, as the loop has a
> rising series impedance with frequency the loops terminal voltage is
> the product the induce current x the impedance. Hence we see that the
> Vout is proportional to frequency.
>
> This issue of the loops series reactance impeding the current is
> discussed in a GB patent for the Liniplex loop manufactured by Phase
> Track in the early nineties. I can't find my copy of this patent. A
> search for patents by Charles Edward Forster my find it. The Liniplex
> loop used multiple loops in parallel to reduce the series reactance
> from impeding the current to the amplifier.
>
> Getting back to the real issue here, we have a loop with output z that
> is frequency dependant, therefore optimum power transfer to the
> amplifier will only happen when the amplifier input z matches the loop.
>
> Kind regards
>
> Andrew
>
> _

10084. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 13:29:38 UTC
From: crabtreejr@...
Topic: 10068 Message: 10084

Hello Chris et al

The idea of using a low impedance amplifier for a loop antenna is not new.
I have just dug out my copy of "H.F. active antenna performance
requirements and realization", by B.M. Sosin, published in "Communication and
Broadcasting", Summer 1976. Sosin was at one time Chief Scientist at one of the
Marconi companies in the UK.

Sosin discusses how a low-impedance amplifier gives near optimal
amplification over the H.F. frequencies. His assumptions, ie 10dB receiver noise
figure, 3 dB noise degradation, low noise areas at quiet times, lead to an
antenna factor of -2dB, ie a field strength of 0.8V/m is required for 1 Volt
output into 50 ohms.

Sosin goes on to say that only the very best receiving systems would be
affected by the noise degradation, and then by a small amount. In those cases
the amplifier gain could be increased by 3 to 8 dB, or an additional low
noise, low intermodulation products used.

Sosin references a paper by Callendar on wideband loop arrays from 1972.

73 John KC0G

In a message dated 8/19/2013 4:59:23 PM Central Daylight Time,
christrask@... writes:
> >
> >Your comment that the loop is a current source with a series reactance is
>
> >interesting.
> >
> >My understanding, is that a small loop can be considered as a voltage
> >source in series with the inductance of the loop, the ohmic losses, and
> the
> >negligle radiation resistance. For a given field strength, the voltage
> output is
> >proportional to frequency. The equivalent current source has an output
> >which is proportional to field strength only, and has a shunt, not
> series,
> >inductance.
> >
> >What am I missing?
> >
>
> I was looking at loops as being voltage sources with series reactances
> until I came across a paper that look at them as being current sources with
> shunt reactances, and it made sense as a loop in a magnetic field generates a

> current to the load that is proportional to the loop diameter and the
> signal frequency. That ptomted me to design my wideband loop amplifier with a
> very low input impedance rather than trying to match the loop reactance over
> a wide band.
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>

10085. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 13:35:01 UTC
From: Chris Trask
Topic: 10068 Message: 10085

>
>Hello Chris et al
>
>The idea of using a low impedance amplifier for a loop antenna is not new.
>I have just dug out my copy of "H.F. active antenna performance
>requirements and realization", by B.M. Sosin, published in "Communication and
>Broadcasting", Summer 1976. Sosin was at one time Chief Scientist at one of the
>Marconi companies in the UK.
>

Could you scan that and add it to the files section?

Chris

10086. Re: Loop around a rancher house

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 13:44:50 UTC
From: sal.cerda
Topic: 10067 Message: 10086

Ron,
There is no reason not to try this. What frequencies are you interested in? How much power will you run?
With the loop around the house, you and your family are inside the loop, so be aware of the field inside it. Also note that your house probably could cause some sort of electrical interference being inside the loop. Try it and see.

With a 20 foot drop in the back, I would also look at a quad or delta loop if you have trees in your back yard. If you are already up on the ladder, install some eye bolts and pulleys for future experiments.

My rather low delta loop for 40 meters works well on 40, 20, 17 and 15 using my Dentron tuner.

Good luck,
Sal

--- In loopantennas@yahoogroups.com, "Ron Polityka" <wb3aal@...> wrote:
>
> Hello,
>
> I am new to this list and I have been spending the past few
> days looking at all the articles and e-mails on-line.
>
> I recently purchased a Johnson Viking 250w Match Box. I

10087. Re: [loopantennas] Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 18:39:00 UTC
From: Andrew Ikin
Topic: 10068 Message: 10087

John,

Ref, to my earlier post concerning the GB Patent for the Liniplex loop. The UK Patent Application no. is GB 2 235 337 A Inventor is Edward Charles Forster. It discusses the problem of the loops series inductance limiting the current to load. In the case of this patent the load is a common base amplifier.

73

Andrew

10088. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-21 10:06:27 UTC
From: loopantennas@yahoogroups.com
Topic: 4 Message: 10088

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /GB2235337A.pdf
Uploaded by : andrewikin <andrew.ikin@...>
Description : LiniPlex loop GB Patent GB2235337A

You can access this file at the URL:
http://groups.yahoo.com/group/loopantennas/files/GB2235337A.pdf

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

andrewikin <andrew.ikin@...>

10089. Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-21 03:25:25 UTC
From: k8nxx
Topic: 10089 Message: 10089

I am fairly new to this group and have been somewhat intrigued by the Mobius loop antenna. Is there any place on the web that describes the construction of the antenna? More specifically I am interested in the VLF/LF arena but I can't seem to locate any links that discuss this.

Fred - N4CLA

10090. Re: [loopantennas] Re: Loop around a rancher house

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-20 23:34:50 UTC
From: Ron Polityka
Topic: 10067 Message: 10090

Hi Sal,

I operate QRP 99% of the time on all the HF bands. I do have a Butternut HF9V in the back yard with 120 radials, Carolina Windom and a TA33Jr beam so if the loop does not work. I do have one tall pine tree on the property.

Going to set it up using PVC at first just to see if the antenna will work. Never know until one tries.

73 and Thanks,
Ron Polityka
WB3AAL
www.wb3aal.com
www.n3epa.org

----- Original Message -----
From: "sal.cerda" <sal.cerda@...>
To: <loopantennas@yahoogroups.com>
Sent: Tuesday, August 20, 2013 9:44 AM
Subject: [loopantennas] Re: Loop around a rancher house

> Ron,
> There is no reason not to try this. What frequencies are
> you interested in? How much power will you run?
> With the loop around the house, you and your family are
> inside the loop, so be aware of the field inside it. Also
> note that your house probably could cause some sort of
> electrical interference being inside the loop. Try it and
> see.
>
> With a 20 foot drop in the back, I would also look at a
> quad or delta loop if you have trees in your back yard. If
> you are already up on the ladder, install some eye bolts
> and pulleys for future experiments.
>
> My rather low delta loop for 40 meters works well on 40,
> 20, 17 and 15 using my Dentron tuner.
>
> Good luck,
> Sal
>
> --- In loopantennas@yahoogroups.com, "Ron Polityka"
> <wb3aal@...> wrote:
>>
>> Hello,

>>
>> I am new to this list and I have been spending the past
>> few
>> days looking at all the articles and e-mails on-line.
>>
>> I recently purchased a Johnson Viking 250w Match Box. I
>
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please
> put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos.
> Upload JPG and GIF into Photos. Please convert BMP or TIF
> to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>

10091. Re: [loopantennas] Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-21 14:36:30 UTC
From: Chris Trask
Topic: 10089 Message: 10091

>
>I am fairly new to this group and have been somewhat intrigued by the Mobius loop antenna. Is there any
>place on the web that describes the construction of the antenna? More specifically I am interested in
>the VLF/LF arena but I can't seem to locate any links that discuss this.
>

Look at this tutorial of mine in the group files section:

Shielded Loop Aerials Rev 0.pdf

It covers the subject of the Meobius Strip shielded loop with a few references that can be found online.

Chris

10092. Re: Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-22 13:18:21 UTC
From: hmaxim2000us
Topic: 10089 Message: 10092

Hello
I am thinking of replacing my single wire loop with a Mobius loop. I looked at several diagrams, including the one in Rev 0.pdf. Most show the shield as not grounded, but the one in Rev0.pdf shows the shield as being grounded at the feedpoint. I don't get this. I can see where the 2 center conductors go to the input of my balanced amp, but if I ground the shield it becomes a dead short to the feedline coax.
I am thinking of using coax to form the loop, snaking it inside a flexible PVC conduit. Thats what I do now with a single wire. I suppose the shieled continuity must be maintained where I cut the coax to bring the two center wires out to the amp? But grounding?
Thanks a bunch!
Jim

>
> Look at this tutorial of mine in the group files section:
>
> Shielded Loop Aerials Rev 0.pdf
>
> It covers the subject of the Meobius Strip shielded loop with a few references that can be found online.
>
>
>
>
> Chris
>

10093. Re: [loopantennas] Re: Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-23 10:24:57 UTC
From: Evverettsharp
Topic: 10089 Message: 10093

Hi Jim,

Contact me at everettsharp (at) aol com and I will send you some pictures and a wiring digram for a möbius loop antenna. I have been experimenting with this configuration now for the last several days and have it working very well.

73 Everett

Sent from my iPad

On Aug 22, 2013, at 8:18 AM, "hmaxim2000us" <jimk2tl@...> wrote:

>
>
> Hello
> I am thinking of replacing my single wire loop with a Mobius loop. I looked at several diagrams, including the one in Rev 0.pdf. Most show the shield as not grounded, but the one in Rev0.pdf shows the shield as being grounded at the feedpoint. I don't get this. I can see where the 2 center conductors go to the input of my balanced amp, but if I ground the shield it becomes a dead short to the feedline coax.
> I am thinking of using coax to form the loop, snaking it inside a flexible PVC conduit. Thats what I do now with a single wire. I suppose the shieled continuity must be maintained where I cut the coax to bring the two center wires out to the amp? But grounding?
> Thanks a bunch!
> Jim
>
> >
> > Look at this tutorial of mine in the group files section:
> >
> > Shielded Loop Aerials Rev 0.pdf
> >
> > It covers the subject of the Meobius Strip shielded loop with a few references that can be found online.
> >
> >
> >
> >
> > Chris
> >
>
>

10094. Re: Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-23 11:05:51 UTC
From: hmaxim2000us
Topic: 10089 Message: 10094

Thank you very much! email sent.

Jim K2TL

--- In loopantennas@yahoogroups.com, Evverettsharp <everettsharp@...> wrote:
>
> Hi Jim,
>
> Contact me at everettsharp (at) aol com and I will send you some pictures and a wiring digram for a mÃ¶bius loop antenna. I have been experimenting with this configuration now for the last several days and have it working very well.
>
> 73 Everett
>
> Sent from my iPad
>
> On Aug 22, 2013, at 8:18 AM, "hmaxim2000us" <jimk2tl@...> wrote:
>
> >
> >
> > Hello
> > I am thinking of replacing my single wire loop with a Mobius loop. I looked at several diagrams, including the one in Rev 0.pdf. Most show the shield as not grounded, but the one in Rev0.pdf shows the shield as being grounded at the feedpoint. I don't get this. I can see where the 2 center conductors go to the input of my balanced amp, but if I ground the shield it becomes a dead short to the feedline coax.
> > I am thinking of using coax to form the loop, snaking it inside a flexible PVC conduit. Thats what I do now with a single wire. I suppose the shieled continuity must be maintained where I cut the coax to bring the two center wires out to the amp? But grounding?
> > Thanks a bunch!
> > Jim
> >
> > >
> > > Look at this tutorial of mine in the group files section:
> > >
> > > Shielded Loop Aerials Rev 0.pdf
> > >
> > > It covers the subject of the Meobius Strip shielded loop with a few references that can be found online.
> > >
> > >
> > >
> > >
> > > Chris
> > >

> >
> >
>

10095. Re: Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-23 11:42:25 UTC
From: AlienRelics
Topic: 10089 Message: 10095

Could you upload them here to the Files or Photos section?

Thanks,
Steve Greenfield AE7HD
moderator loopantennas

--- In loopantennas@yahoogroups.com, Evverettsharp <everettsharp@...> wrote:
>
> Hi Jim,
>
> Contact me at everettsharp (at) aol com and I will send you some pictures and a wiring digram for a mÃ¶bius loop antenna. I have been experimenting with this configuration now for the last several days and have it working very well.
>
> 73 Everett
>
> Sent from my iPad
>

10096. Re: [loopantennas] Re: Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-23 12:50:18 UTC
From: Evverettsharp
Topic: 10089 Message: 10096

Hi Steve,

In the next few days I will write an article on my project and post it in the files section, as I have with many of my past experiments and projects. It is too early to post anything yet, but at this point I know that it is working very well.

73 Everett N8CNP

Sent from my iPad

On Aug 23, 2013, at 6:42 AM, "AlienRelics" <alienrelics@...> wrote:

> Could you upload them here to the Files or Photos section?
>
> Thanks,
> Steve Greenfield AE7HD
> moderator loopantennas
>
> --- In loopantennas@yahoogroups.com, Evverettsharp <everettsharp@...> wrote:
> >
> > Hi Jim,
> >
> > Contact me at everettsharp (at) aol com and I will send you some pictures and a wiring digram for a möbius loop antenna. I have been experimenting with this configuration now for the last several days and have it working very well.
> >
> > 73 Everett
> >
> > Sent from my iPad
> >
>
>

10097. Re: [loopantennas] Re: Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-23 14:15:00 UTC
From: Andy
Topic: 10089 Message: 10097

> ... but if I ground the shield it becomes a dead short to the feedline coax.

It is no more than a dead short, than a loop antenna is a short on the feedline. And yet we know loop antennas work. The "short" is only at DC.

Think of it as a balanced loop antenna where the center-tap of the loop is grounded.

Andy

10098. Re: Mobius Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-24 11:10:32 UTC
From: hmaxim2000us
Topic: 10089 Message: 10098

Hello
Using a balanced amp as I do, the loop is not a direct short to ground at DC. The shield of the feedline is not involved in the loop itself. What confused me was in the Mobius design where the feedline is indeed shorted to the center conductor, which is fine until you also connect it to the feedline shield. Everett cleared that up nicely with his diagram he sent me.
I understand that many antenna designs use matching transformers and such that provide a direct DC path to ground but at RF it not a problem. Not so with a 3 foot diameter loop at VLF or even at 30 Mhz.
All good stuff. Great group here.
Jim K2TL

--- In loopantennas@yahoogroups.com, Andy <ai.egrps@...> wrote:
>
> > ... but if I ground the shield it becomes a dead short to the feedline coax.
>
> It is no more than a dead short, than a loop antenna is a short on the
> feedline. And yet we know loop antennas work. The "short" is only at DC.
>
> Think of it as a balanced loop antenna where the center-tap of the
> loop is grounded.
>
> Andy
>

10099. Prototype-Antenna tuner with two servos controlled by Arduino

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-28 00:46:44 UTC
From: pu2clr
Topic: 10099 Message: 10099

Hello everybody,

I would like to share with you a new version of my antenna tuner.

Now I installed two capacitors. A homebrew butterfly capacitor was introduced to improve the precision during the tuning process.

My apologies for the poor English presented in the video.

Link Youtube: http://www.youtube.com/watch?v=Rwl3G2ET7Jw

73,
Ricardo.

10100. Re: [loopantennas] Prototype-Antenna tuner with two servos controlled by Arduino

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-08-28 03:48:29 UTC
From: John Schroeder
Topic: 10099 Message: 10100

Ricardo: Thank you for the video.

John Schroeder
Beaverton, Oregon, USA

On 8/27/2013 5:46 PM, pu2clr wrote:
>
> Hello everybody,
>
> I would like to share with you a new version of my antenna tuner.
>
> Now I installed two capacitors. A homebrew butterfly capacitor was
> introduced to
> improve the precision during the tuning process.
>
> My apologies for the poor English presented in the video.
>
> Link Youtube: http://www.youtube.com/watch?v=Rwl3G2ET7Jw
>
> 73,
> Ricardo.
>
>

10101. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-01 12:12:39 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10101

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10102. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-01 12:12:39 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10102

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10103. Re: Mobius Shielded Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-01 11:43:28 UTC
From: hmaxim2000us
Topic: 10068 Message: 10103

Hello Group
I just wanted to update you on the Mobius loop as described by Everett N8CNP . I finally got my RG/11 although it turned out to be a cable with aluminum shielding and some kind of lubricant between the shield and the jacket a real mess to work with. I used it anyway.
So I find that it performs much better than a single turn loop. In fact it equals or outperforms my reference antenna which is an 88 foot twinlead fed inverted Vee at 45 feet. But only in the evening. During the day the loop is almost useless. Have not figured that out yet.
One other thing I was hoping you might be able answer. The loop performance drops off considerably by the time I get to 40 meters. On 30 meters it is nearly deaf.
I am thinking there is a problem with my amp. Do you think T1 should be adjusted? Maybe I am not coupling enough high frequency voltage from T1? I was thinking maybe 15 turns is too much? Also, can I use a F T50 core, and if so, how would this effect the number of turns?
What do you think about the transistors? I get superb performance from 100 khz up to around 4 or 5 Mhz, but after that it really takes a dive. I have a pair of 2n5109's but have not installed them yet. Do you think it would be better than the 2n3904's I use now?
Jim
K2TL

```
--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
> Hi Andrew,
>
> Thank you for your comments and you input. I tried several different hook
> ups with the standard shielded loop configuration and even tried a matching
> transformer using one of the 73 mix binocular cores, with several different
> ratios, but was never able to get it to work just right. I could not get
> the loop balanced correctly, as my 180 nulls were no where the same. Maybe
> I just did not come up with the correct combination.
>
> However, with the Mobius configuration it worked from the get go, with the
> M0YAF amp, of which I built 4 of them. I also tried the LZ1AQ broadband
> amp, but it did not work very well on any of the shielded loop configurations,
> but did okay on the standard 14 gage wire loop.
>
> Your observation on the lower performance above about 16 MHz is very
> similar to what I am seeing, but as I have moved up from first, from RG58, then
> to my home made coax and now to the RG11, I am seeing improvement. The RG 58
> has a capacitance of around 30 pf per foot, I did not measure my home made
> coax and the RG11 runs about 20 pf per foot, so again in your remarks on
> the capacitance maybe what is degrading my top end performance.
>
> 73 Everett
>
>
> In a message dated 8/19/2013 2:55:40 P.M. Central Daylight Time,
```

> andrew.ikin@... writes:
>
>
>
>
>
> Dear Everett,
> Thanks for sharing your observations. I would suggest that the difference
> you are seeing in loop performace comes down to how well the loops are
> matched to the ampfiliers and whether you are using a balanced amplifer to
> cancel out any near E field noise. All the mobius loop is doing is increasing
> the loops impedance. This could be have been achieved with a transformer.
> Some time ago I compared a Mobius loop (1m diam) to a 1m 3/4 tube loop
> using an ALA1530 Amplifier and a higher impedance low noise FET amplifier.
> What I found was; below approx. 16MHz both loop types would provide similar
> performance when taking into consideration the differing loop z to amplifier
> input z.
> Above 16MHz the capacitance of the Mobius loop was too high and thus the
> gain drops off. Where both loop types have a resonable match to the
> amplifier the signal and s/n are the same.
> If one looks at the two loop types intuatively, both have the same area,
> so it would be fair to say that they capture the same signal. With the
> mobuis the deliverable current to the amplifier is 4 x lower because the
> impedance is 4 x higher. Hence this is why Pixel use a 50 ohm input z amplifier
> to acheive good results compared to some designs using a near zero input
> impedance. The basic fallacy with using a near zero input z amplifier is
> that a loop is not a low z current source, but a current source with a series
> reactance. It is this rising reactance verses frequency which dominates
> the loss in a broadband loop antenna, hence the need to provide a reasonable
> loop/amplifier match.
> 73
> Andrew Ikin
>

10104. A Practical Approach To Building and Evaluating a Broadband Active Loop Antenna,

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-09 22:06:39 UTC
From: Everett
Topic: 10104 Message: 10104

Guys,

I just posted in the file section an article that I just finished.
"A Practical Approach To Building and Evaluating a Broadband Active Loop Antenna, looking at the Mobius, Conventional Shielded and Wire Loops"

Everett N8CNP

10105. Experimental Comparison of Small Wideband Magnetic Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-10 08:54:45 UTC
From: <lz1aq@...>
Topic: 10105 Message: 10105

Hello,

I have made some more precise experiments to compare different wideband small magnetic loops working in short circuit mode (the active amplifier is with very low input impedance) : "Experimental Comparison of Small Wideband Magnetic Loops"

http://www.lz1aq.signacor.com/docs/experimental-comparison-v10.pdf

This article is based on previous one: "Wideband Active Small Magnetic Loop Antenna"

http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm

There is also a spreadsheet to calculate loop parameters:
http://www.lz1aq.signacor.com/docs/w-loop-calc-v10.xls

Chavdar LZ1AQ

lz1aq@abv.bg

www.lz1aq.signacor.com

10106. Re: Experimental Comparison of Small Wideband Magnetic Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-10 16:24:54 UTC
From: vbifyz
Topic: 10105 Message: 10106

Hi Chavdar,

Thank you for sharing these very interesting results.
There is one more characteristic that is very important for loop antennas: null depth. It is especially interesting for those of us who are not in a quiet rural location.
Did you try to measure it?
I guess it is defined more by the amplifier common mode rejection ratio, but should be some function of the loop geometry as well.

73, Mike VE3YXA

10107. RE: Re: Experimental Comparison of Small Wideband Magnetic Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-11 11:26:50 UTC
From: <lz1aq@...>
Topic: 10105 Message: 10107

Hello Mike,
- A good loop balance (high common mode rejection) is essential in order to reach high null depth. Most often if the loop has different null depths between its two sides the main reason is the poor common mode rejection
- I have not measured carefully the loop null depth because it is very unstable below 20 dB level. I think that one of the reasons is the polarization of the incoming wave. Model simulations show the small loop above real ground has significant horizontal polarization component rotated at 90 deg. to the vertical component. The small loop has very deep null for vertically polarized waves but if the polarization of the wave is tilted slightly there will be the effect of reducing the null since in this direction the horizontal component of the loop pattern has its maximum. So to null completely the source you should have to tilt slightly the loop.
- Model simulations show that in free space crossed coplanar loops have very weak horizontal component – almost null. But above real ground the horizontal component is almost the same as in the ordinary single loop.
- My experiments show that 20 dB rejections is the normal limit for loop rejection. If you reach 20 dB rejection from both sides of the loop that means your loop is working properly. By careful adjustment the man can gain some more dB but that is all. You might reach a rejection above 30 dB but the null will be unstable and will change with the weather conditions, loop tilt due to wind etc.

73 Chavdar LZ1AQ
lz1aq at abv.bg
www.lz1aq.signacor.com

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

Hi Chavdar,

Thank you for sharing these very interesting results.
There is one more characteristic that is very important for loop antennas: null depth. It is especially interesting for those of us who are not in a quiet rural location.
Did you try to measure it?
I guess it is defined more by the amplifier common mode rejection ratio, but should be some function of the loop geometry as well.

73, Mike VE3YXA

10108. Alex loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-11 22:52:07 UTC
From: Tom
Topic: 10108 Message: 10108

HI Guys
Could some one explain to me how the Alex Loop or Alex arrived at the small diameter (I am not sure of the exact size)of his loop to be able to run 40m to 10m as I would have thought 7 to 28 would have been much bigger in Dia.
Dose this have something to do with the fact it is designed for QRP?
Thanks for any replies.
Tom

10109. Re: [loopantennas] Alex loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 00:57:44 UTC
From: Kyle N4NSS
Topic: 10108 Message: 10109

It is 1/5 the length of the big loop.

Kyle N4NSS http://www.buysellnet.net/
Fully Loaded:
Elecraft: K3 #1605 KPA500 #029 P3 #1480 KAT500 #50 KX3 #1845
Operated in memory of W9DVM (SK). Phil.... You are missed.

>_____
> From: Tom <m0zsa@...>
>To: loopantennas@yahoogroups.com
>Sent: Wednesday, September 11, 2013 6:52 PM
>Subject: [loopantennas] Alex loop
>
>
>
>HI Guys
>Could some one explain to me how the Alex Loop or Alex arrived at the small diameter (I am not sure of the exact size)of his loop to be able to run 40m to 10m as I would have thought 7 to 28 would have been much bigger in Dia.
>Dose this have something to do with the fact it is designed for QRP?
>Thanks for any replies.
>Tom
>
>
>

10110. RE: Alex loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 07:34:58 UTC
From: <riccardodematteis@...>
Topic: 10108 Message: 10110

A good vacuum capacitor?

10111. Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 11:19:01 UTC
From: <syomin@...>
Topic: 10111 Message: 10111
Attachments: 4 described; binary payloads are missing from this source WARC

Hi, everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (http://www.diptrace.com/?en=1).

Best regards,
Pavel

10112. RE: Alex loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 11:58:47 UTC
From: <jdm110@...>
Topic: 10108 Message: 10112

It's a compromise antenna on 40m with very low efficiency.That does not mean it won't work! It just theoretically won't work as well as a loop of the proper size for 40m. Lots of folks report very good results using loops smaller than optimum size. But keep in mind under the right conditions it's actually pretty amazing how little power is needed for successful QSOs so efficiency is not always of paramount importance. Alex can better answer how he arrived at the 3 ft diameter but I always figured it was because that's simply a good size for a portable antenna. Regarding why the antenna is for QRP that's a function of the coax used for the main loop and the small air variable cap that's employed, not the fact that it's small diameter.

73,
John
K4KQZ

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

HI Guys
Could some one explain to me how the Alex Loop or Alex arrived at the small diameter (I am not sure of the exact size)of his loop to be able to run 40m to 10m as I would have thought 7 to 28 would have been much bigger in Dia.
Dose this have something to do with the fact it is designed for QRP?
Thanks for any replies.
Tom

10113. Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 14:09:17 UTC
From: <kg4lac@...>
Topic: 10113 Message: 10113

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10114. Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 14:49:40 UTC
From: kkyahoo
Topic: 10113 Message: 10114

Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 3:09 PM
Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10115. RE: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 16:02:03 UTC
From: <kg4lac@...>
Topic: 10113 Message: 10115

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

☐
Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----

From: kg4lac@...

To: loopantennas@yahoogroups.com

Sent: Thursday, September 12, 2013 3:09 PM

Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10116. Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 17:40:20 UTC
From: kkyahoo
Topic: 10113 Message: 10116

Kraig,

What is the power level of the MW tx and what rx or tcvr are you using?

Kevin
----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 5:02 PM
Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

□
Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 3:09 PM
Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10117. RE: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 19:01:14 UTC
From: <kg4lac@...>
Topic: 10113 Message: 10117

Kevin,
1460 kHz WKDV. Using Winrado G33DDC SDR.

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

☐
Kraig,

What is the power level of the MW tx and what rx or tcvr are you using?

Kevin

----- Original Message -----

From: kg4lac@...

To: loopantennas@yahoogroups.com

Sent: Thursday, September 12, 2013 5:02 PM

Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

☐
Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----

From: kg4lac@...

To: loopantennas@yahoogroups.com

Sent: Thursday, September 12, 2013 3:09 PM

Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10118. RE: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-12 14:41:46 UTC
From: <lx2sm.lx2ooo@...>
Topic: 10113 Message: 10118

Hi.
Wellbrook have a justified reputation but there are much cheaper very good alternative.

http://www.lz1aq.signacor.com/
http://www.charly-hardt.de/hdla.html

Regards

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10119. Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-13 15:23:40 UTC
From: John
Topic: 10113 Message: 10119

I lost my house end tall pine tree, supporter of LW's, Zepp fed, TTFD, etc, several years ago. I gathered my sheckles and that winter found me taking a chance on a USA-made Pixel Pro-1A. It's upgrade to 1B, changing the loop of it's modular construction, is pending - I just hate to replace something that works so well. It was mounted on a five foot TV mast section which was held by an eave mount mounted to my back deck's skirt. The loop's center was maybe eight feet at most off the ground and eleven feet from the back of my house and rotated for minimum noise pickup. In my 36.5 yr of living there, only the TTFD was as quiet - and then only over a narrow frequency range, which didn't include MW as the TTFD signal levels dropped appreciably there. I used my old loggings and my Drake R8 for comparison, switching to my new Palstar R30A in a minimization/simplification attempt.

Jan 2012 found an F4 tornado hitting my neighbors a block away. I lost huge limbs, deck furniture, wind chimes, and bird houses & feeders - but the Pixel PRO-1A was fine. We bought a 'garden home' in an area with an HOA that doesn't permit outside aerials, save a DIRECTV antenna mounted on the backside of the steep roof in July. The floored walk-in attic and CATV wiring made me get a Channel Master tripod TV mast mount and bring the Pixel loop antenna - on it's five foot mast - into the attic. I disconnected the RG-6 up in the attic feeding the CATV jack behind my desk, added six feet of RG-6 to the Pixel's amp and aligned the loop to null the nearby HVAC unit. It would be nearly two weeks before I would find the power inserter and wall wart for the Pixel, although I found my complete set of Magne's PBWBR immediately. Moving is an experience after so long. The result was even better than at my old home! Stronger signals - even local MW stations produced no discernible IM or CM, perhaps as much a testimony to the receivers' designs as to the antenna's! Still, I think the Pixel is a great antenna - and would rather have it over the Wellbrook. Either is a pricey decision.

John

10120. RE: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-13 17:04:27 UTC
From: Dominique Kremp
Topic: 10113 Message: 10120

Hi John & all,

I purchased a Pixel Pro-1A in January and could compare it to my 5 Wellbrook loops (ALA1530, ALA100, ALA100M, AVA100, LA1010).
In the competition, the Wellbrook loops always were the best ones, especially in the VLF and NDB band.
I sold it. You understand why !
Here is a very comprehensive test from Guy Atkins between the PIXEL and the ALA1530 loops.
http://tinyurl.com/qj343fz
I fully agree with his conclusions.

Dominique
Normandy, France

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de John
Envoyé : vendredi 13 septembre 2013 17:24
À : loopantennas@yahoogroups.com
Objet : [loopantennas] Re: Wellbrook Loop ALA1530

I lost my house end tall pine tree, supporter of LW's, Zepp fed, TTFD, etc, several years ago. I gathered my sheckles and that winter found me taking a chance on a USA-made Pixel Pro-1A. It's upgrade to 1B, changing the loop of it's modular construction, is pending - I just hate to replace something that works so well. It was mounted on a five foot TV mast section which was held by an eave mount mounted to my back deck's skirt. The loop's center was maybe eight feet at most off the ground and eleven feet from the back of my house and rotated for minimum noise pickup. In my 36.5 yr of living there, only the TTFD was as quiet - and then only over a narrow frequency range, which didn't include MW as the TTFD signal levels dropped appreciably there. I used my old loggings and my Drake R8 for comparison, switching to my new Palstar R30A in a minimization/simplification attempt.

Jan 2012 found an F4 tornado hitting my neighbors a block away. I lost huge limbs, deck furniture, wind chimes, and bird houses & feeders - but the Pixel PRO-1A was fine. We bought a 'garden home' in an area with an HOA that doesn't permit outside aerials, save a DIRECTV antenna mounted on the backside of the steep roof in July. The floored walk-in attic and CATV wiring made me get a Channel Master tripod TV mast mount and bring the Pixel loop antenna - on it's five foot mast - into the attic. I disconnected the RG-6 up in the attic feeding the CATV jack behind my desk, added six feet of RG-6 to the Pixel's amp and aligned the loop to null the nearby HVAC unit. It would be nearly two weeks before I would find the power inserter and wall wart for the Pixel, although I found my complete set of Magne's PBWBR

immediately. Moving is an experience after so long. The result was even better than at my old home! Stronger signals - even local MW stations produced no discernible IM or CM, perhaps as much a testimony to the receivers' designs as to the antenna's! Still, I think the Pixel is a great antenna - and would rather have it over the Wellbrook. Either is a pricey decision.

John

If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!Yahoo! Groups Links

10121. Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-13 17:49:01 UTC
From: kkyahoo
Topic: 10113 Message: 10121

Kraig,

Assuming that the MW tx is 50kW and transmitting at 1MHz, and the environment is suburban then you will get nearly 0dbm into your receiver with a loop. That is a very big signal.

The Imperium second order intermods are 90dBm and the thirds are spec'd at 55dbm. Even a modern rtcvr such as the Kenwood 990 with the preamp off has 3rds at ~35dBm so the receiver will be the limiting factor not the Wellbrook loop. I don't know what rx you are using so difficult to say whether it will cause problems. But at least the loop will allow you to put the MW tx in the null and that will reduce the signal by up to 30dB.

Because the loop and its amplifier are more linear than the receiver, if you do have problems you can simply switch in the attenuator in the receiver.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 5:02 PM
Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

□
Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----
From: kg4lac@...

To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 3:09 PM
Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10122. Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-13 18:45:07 UTC
From: Andrew Ikin
Topic: 10113 Message: 10122

Kevin,

Working on the assumption of a 50kW Tx the F/S will be approx. 114dBuV/m at 1MHz for a 4km distance. The Imperium uses the same loop as the ALA1530 with an AF of about 5dB. Also the Antenna Interface amplifier will add another 9dB of gain. So the loop will be pushing +12dBm. This is far too high to ensure IMD free reception even with Rx attenuation.

Kraig, did contact me a few days ago and I suggested that he should consider the ALA1530LF as this lower MW IMD.

A lower cost option of using the ALA100LN or the ALA100M with the loop size tailored for IMD free reception is worth considering.

Kind regards

Andrew Ikin

Wellbrook Communications

----- Original Message -----
From: kkyahoo
To: loopantennas@yahoogroups.com
Sent: Friday, September 13, 2013 6:49 PM
Subject: Re: Re: [loopantennas] Wellbrook Loop ALA1530

□

Kraig,

Assuming that the MW tx is 50kW and transmitting at 1MHz, and the environment is suburban then you will get nearly 0dbm into your receiver with a loop. That is a very big signal.

The Imperium second order intermods are 90dBm and the thirds are spec'd at 55dbm. Even a modern rtcvr such as the Kenwood 990 with the preamp off has 3rds at ~35dBm so the receiver will be the limiting factor not the Wellbrook loop. I don't know what rx you are using so difficult to say whether it will cause problems. But at least the loop will allow you to put the MW tx in the null and that will reduce the signal by up to 30dB.

Because the loop and its amplifier are more linear than the receiver, if you do have problems you can simply switch in the attenuator in the receiver.

73

Kevin

----- Original Message -----
From: kg4lac@yahoo.com
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 5:02 PM

Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

□
Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 3:09 PM
Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10123. Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-13 19:56:04 UTC
From: John
Topic: 10113 Message: 10123

Hello Dominique, etc,

I met Guy many years ago while we both worked on Proceedings, etc. I respect his opinion even if I don't always agree with it. Jack Smith, owner/founder of Clifton Labs, did a bit more rigorous comparison of a Pro-1B and a 1530L and his results are published on the Pixelsatradio.com site. His findings were that the Pro-1B bested the 1530L nearly 2/3 of the time averaging over 3db better s/n ratio, with the Wellbrook's better performance datums not quite as high. To put that in perspective, the wrong headphones, earwax buildup, a touch of tinnitus, etc, even distorted audio stages, can make a 3 db s/n ratio difference inconsequential.

Often, reviewers have 'a dog in the hunt' - a vested interest - which taints their objectivity. That could be the case here - or not. Guy's review is on Wellbrook's site - Jack Smith's is on the Pixel site - and he is the EE that designed their preamp! So, they should be taken with a grain of salt. Dominique, I don't doubt you got better signals on VLF - NDB's - your Wellbrooks are clearly better (My Pro-1A gives an S7 for 25W NDB 'BH' some 24 miles from here!) below the MW BCB - gain goes to zilch by 100 kHz. MW and SW - to 16 mb -on my Pro-1A are super - the combo of it, the Palstar and it's Colins mech (Okay, torsional!) filter, and a decent speaker makes program listening fun again - or would if there were still SWBC stations!

The modular construction made the improved preamp Pro-1 become the 1A, while an improved loop made the 1B. Upgrades are easy with such modular construction - impossible with sealed/potted preamps made into the antenna. Wellbrook's continued improvements means a new antenna! Oddly, price is important, too - and the Pro-1B is now $500! Oops....

John

--- In loopantennas@yahoogroups.com, "Dominique Kremp" <dominique.kremp@...> wrote:
>
> Hi John & all,
>
> I purchased a Pixel Pro-1A in January and could compare it to my 5 Wellbrook
> loops (ALA1530, ALA100, ALA100M, AVA100, LA1010).
> In the competition, the Wellbrook loops always were the best ones,
> especially in the VLF and NDB band.
> I sold it. You understand why !
> Here is a very comprehensive test from Guy Atkins between the PIXEL and the
> ALA1530 loops.
> http://tinyurl.com/qj343fz
> I fully agree with his conclusions.
>
> Dominique
> Normandy, France
>
>

> -----Message d'origine-----
> De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De
> la part de John
> Envoyé : vendredi 13 septembre 2013 17:24
> À : loopantennas@yahoogroups.com
> Objet : [loopantennas] Re: Wellbrook Loop ALA1530
>
> I lost my house end tall pine tree, supporter of LW's, Zepp fed, TTFD, etc,
> several years ago. I gathered my sheckles and that winter found me taking a
> chance on a USA-made Pixel Pro-1A. It's upgrade to 1B, changing the loop of
> it's modular construction, is pending - I just hate to replace something
> that works so well. It was mounted on a five foot TV mast section which was
> held by an eave mount mounted to my back deck's skirt. The loop's center was
> maybe eight feet at most off the ground and eleven feet from the back of my
> house and rotated for minimum noise pickup. In my 36.5 yr of living there,
> only the TTFD was as quiet - and then only over a narrow frequency range,
> which didn't include MW as the TTFD signal levels dropped appreciably there.
> I used my old loggings and my Drake R8 for comparison, switching to my new
> Palstar R30A in a minimization/simplification attempt.
>
> Jan 2012 found an F4 tornado hitting my neighbors a block away. I lost huge
> limbs, deck furniture, wind chimes, and bird houses & feeders - but the
> Pixel PRO-1A was fine. We bought a 'garden home' in an area with an HOA that
> doesn't permit outside aerials, save a DIRECTV antenna mounted on the
> backside of the steep roof in July. The floored walk-in attic and CATV
> wiring made me get a Channel Master tripod TV mast mount and bring the Pixel
> loop antenna - on it's five foot mast - into the attic. I disconnected the
> RG-6 up in the attic feeding the CATV jack behind my desk, added six feet of
> RG-6 to the Pixel's amp and aligned the loop to null the nearby HVAC unit.
> It would be nearly two weeks before I would find the power inserter and wall
> wart for the Pixel, although I found my complete set of Magne's PBWBR
> immediately. Moving is an experience after so long. The result was even
> better than at my old home! Stronger signals - even local MW stations
> produced no discernible IM or CM, perhaps as much a testimony to the
> receivers' designs as to the antenna's! Still, I think the Pixel is a great
> antenna - and would rather have it over the Wellbrook. Either is a pricey
> decision.
>
> John
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
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>
> And please trim all this when replying!Yahoo! Groups Links
>

10124. Re: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-13 20:22:37 UTC
From: Andrew Ikin
Topic: 10113 Message: 10124

John Wrote on Sept. 14.

"The modular construction made the improved preamp Pro-1 become the 1A, while an improved loop made the 1B. Upgrades are easy with such modular construction - impossible with sealed/potted preamps made into the antenna. Wellbrook's continued improvements means a new antenna! Oddly, price is important, too - and the Pro-1B is now $500! Oops...."

John, Wellbrook's loop amplifier can be replaced at a reasonable price; much lower than Pixel's price of $200.00 that a fellow group member mentioned a while ago.

Regards

Andrew

10125. Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 00:30:14 UTC
From: John
Topic: 10113 Message: 10125

Wow - I heard that the Wellbrook's pre-amp requires surgery to get it out of the antenna and even then it is potted, making further dissection impossible. I have no first hand knowledge of this - if someone does, please report in!

John

--- In loopantennas@yahoogroups.com, Andrew Ikin <andrew.ikin@...> wrote:
>
> John Wrote on Sept. 14.
>
> "The modular construction made the improved preamp Pro-1 become the 1A, while an improved loop made the 1B. Upgrades are easy with such modular construction - impossible with sealed/potted preamps made into the antenna. Wellbrook's continued improvements means a new antenna! Oddly, price is important, too - and the Pro-1B is now $500! Oops...."
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> John, Wellbrook's loop amplifier can be replaced at a reasonable price; much lower than Pixel's price of $200.00 that a fellow group member mentioned a while ago.
>
>
> Regards
>
> Andrew
>

10126. RE: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 08:41:02 UTC
From: Dominique Kremp
Topic: 10113 Message: 10126

Hi John & all,

I purchased a Pixel Pro-1A in January and could compare it to my 6 Wellbrook loops (ALA1530 (2x), ALA100, ALA100M, AVA100, LFL1010).
As I have a very uncomfortable pest close to my QTH (12km / bat. 7mi) i.e. a LORAN-C transmitter (LESSAY/Normandy) which sends 250kW on 100kHz from a 250m high tower 24 hours a day, you can imagine that the tests are quite hard to pass for the antennas whatever they are!
I can say the Wellbrook loops always were the best ones in terms of S/N and sensivity, not only in the VLF and NDB band !
I sold the Pixel Pro-1A. You understand why !

Here is a very comprehensive test from Guy Atkins between the PIXEL and the ALA1530 loops.
http://tinyurl.com/qj343fz

I fully agree with his conclusions.
Have a nice day

Dominique
Normandy, France

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de John Envoyé : vendredi 13 septembre 2013 17:24 À : loopantennas@yahoogroups.com Objet : [loopantennas] Re: Wellbrook Loop ALA1530

I lost my house end tall pine tree, supporter of LW's, Zepp fed, TTFD, etc, several years ago. I gathered my sheckles and that winter found me taking a chance on a USA-made Pixel Pro-1A. It's upgrade to 1B, changing the loop of it's modular construction, is pending - I just hate to replace something that works so well. It was mounted on a five foot TV mast section which was held by an eave mount mounted to my back deck's skirt. The loop's center was maybe eight feet at most off the ground and eleven feet from the back of my house and rotated for minimum noise pickup. In my 36.5 yr of living there, only the TTFD was as quiet - and then only over a narrow frequency range, which didn't include MW as the TTFD signal levels dropped appreciably there. I used my old loggings and my Drake R8 for comparison, switching to my new Palstar R30A in a minimization/simplification attempt.

Jan 2012 found an F4 tornado hitting my neighbors a block away. I lost huge limbs, deck furniture, wind chimes, and bird houses & feeders - but the Pixel PRO-1A was fine. We bought a 'garden home' in an area with an HOA that doesn't permit outside aerials, save a DIRECTV antenna mounted on the backside of the steep roof in July. The floored walk-in attic and CATV wiring made me get a Channel Master tripod TV mast mount and bring the Pixel

loop antenna - on it's five foot mast - into the attic. I disconnected the RG-6 up in the attic feeding the CATV jack behind my desk, added six feet of RG-6 to the Pixel's amp and aligned the loop to null the nearby HVAC unit. It would be nearly two weeks before I would find the power inserter and wall wart for the Pixel, although I found my complete set of Magne's PBWBR immediately. Moving is an experience after so long. The result was even better than at my old home! Stronger signals - even local MW stations produced no discernible IM or CM, perhaps as much a testimony to the receivers' designs as to the antenna's! Still, I think the Pixel is a great antenna - and would rather have it over the Wellbrook. Either is a pricey decision.

John

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-----Message d'origine-----
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Envoyé : vendredi 13 septembre 2013 17:24
À : loopantennas@yahoogroups.com
Objet : [loopantennas] Re: Wellbrook Loop ALA1530

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doesn't permit outside aerials, save a DIRECTV antenna mounted on the backside of the steep roof in July. The floored walk-in attic and CATV wiring made me get a Channel Master tripod TV mast mount and bring the Pixel loop antenna - on it's five foot mast - into the attic. I disconnected the RG-6 up in the attic feeding the CATV jack behind my desk, added six feet of RG-6 to the Pixel's amp and aligned the loop to null the nearby HVAC unit. It would be nearly two weeks before I would find the power inserter and wall wart for the Pixel, although I found my complete set of Magne's PBWBR immediately. Moving is an experience after so long. The result was even better than at my old home! Stronger signals - even local MW stations produced no discernible IM or CM, perhaps as much a testimony to the receivers' designs as to the antenna's! Still, I think the Pixel is a great antenna - and would rather have it over the Wellbrook. Either is a pricey decision.

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And please trim all this when replying!Yahoo! Groups Links

10127. Re: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 10:24:08 UTC
From: Andrew Ikin
Topic: 10113 Message: 10127

John,

The replacement amp. is designed to slot into the loop once the old amp has been cut off. This option is normally offered to customers where the shipping cost for a new loop is too high.

Kind regards

Andrew

----- Original Message -----
From: John
To: loopantennas@...m
Sent: Saturday, September 14, 2013 1:30 AM
Subject: [loopantennas] Re: Wellbrook Loop ALA1530

Wow - I heard that the Wellbrook's pre-amp requires surgery to get it out of the antenna and even then it is potted, making further dissection impossible. I have no first hand knowledge of this - if someone does, please report in!

John

--- In loopantennas@yahoogroups.com, Andrew Ikin <andrew.ikin@...> wrote:
>
> John Wrote on Sept. 14.
>
> "The modular construction made the improved preamp Pro-1 become the 1A, while an improved loop made the 1B. Upgrades are easy with such modular construction - impossible with sealed/potted preamps made into the antenna. Wellbrook's continued improvements means a new antenna! Oddly, price is important, too - and the Pro-1B is now $500! Oops...."
>
>
> John, Wellbrook's loop amplifier can be replaced at a reasonable price; much lower than Pixel's price of $200.00 that a fellow group member mentioned a while ago.
>
>
> Regards
>
> Andrew
>

10128. Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 10:26:41 UTC
From: kkyahoo
Topic: 10113 Message: 10128

Andrew,

I assumed suburban path conditions, if I assume the same sort of ground conductivity found in my locale then I also get around the 12dBm level. This is a 2.5volt peak to peak signal in a 50 ohm circuit so the back to back protection diodes, if fitted, will be working overtime, so a definite no no. I would imagine the bandswitching diodes would be having a hard time too.

I understand that the Pixel has a high gain amp and so I think that there would be issues with this model when using it so close to the MW tx.

73 Kevin

----- Original Message -----
From: Andrew Ikin
To: loopantennas@yahoogroups.com
Sent: Friday, September 13, 2013 7:45 PM
Subject: Re: Re: [loopantennas] Wellbrook Loop ALA1530

□

Kevin,

Working on the assumption of a 50kW Tx the F/S will be approx. 114dBuV/m at 1MHz for a 4km distance. The Imperium uses the same loop as the ALA1530 with an AF of about 5dB. Also the Antenna Interface amplifier will add another 9dB of gain. So the loop will be pushing +12dBm. This is far too high to ensure IMD free reception even with Rx attenuation.

Kraig, did contact me a few days ago and I suggested that he should consider the ALA1530LF as this lower MW IMD.

A lower cost option of using the ALA100LN or the ALA100M with the loop size tailored for IMD free reception is worth considering.

Kind regards

Andrew Ikin

Wellbrook Communications

----- Original Message -----
From: kkyahoo
To: loopantennas@yahoogroups.com
Sent: Friday, September 13, 2013 6:49 PM
Subject: Re: Re: [loopantennas] Wellbrook Loop ALA1530

□

Kraig,

Assuming that the MW tx is 50kW and transmitting at 1MHz, and the environment is suburban then you will get nearly 0dbm into your receiver with a loop. That is a very big signal.

The Imperium second order intermods are 90dBm and the thirds are spec'd at 55dbm. Even a modern rtcvr such as the Kenwood 990 with the preamp off has 3rds at ~35dBm so the receiver will be the limiting factor not the Wellbrook loop. I don't know what rx you are using so difficult to say whether it will cause problems. But at least the loop will allow you to put the MW tx in the null and that will reduce the signal by up to 30dB.

Because the loop and its amplifier are more linear than the receiver, if you do have problems you can simply switch in the attenuator in the receiver.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 5:02 PM
Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

□
Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 3:09 PM
Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10129. Re: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 11:09:28 UTC
From: kkyahoo
Topic: 10113 Message: 10129

John,

I recently replaced a 1530 head amp on my vintage 1999 Wellbrook loop. I just took the screws out and twisted the old head amp until it became free. The preferred method is to use a junior hacksaw and remove it that way. You might find some old potting compound in the ends of the loop but this just comes out with a bit of effort with a screwdriver. The new amp is already potted, no need to mess around.

Fitting the new one is simple, the loop ends fit snugly over the tubes on the new head amp. You can then leave it as a friction fit or you can use some self tappers to attach it. I paid 60 GBP shipped in the UK, approx $90.

I have posted a picture of my replacement head amp in the photos section.

73

Kevin

G8LYV
----- Original Message -----
From: John
To: loopantennas@yahoogroups.com
Sent: Saturday, September 14, 2013 1:30 AM
Subject: [loopantennas] Re: Wellbrook Loop ALA1530

Wow - I heard that the Wellbrook's pre-amp requires surgery to get it out of the antenna and even then it is potted, making further dissection impossible. I have no first hand knowledge of this - if someone does, please report in!

John

--- In loopantennas@yahoogroups.com, Andrew Ikin <andrew.ikin@...> wrote:
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> John Wrote on Sept. 14.
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>
> John, Wellbrook's loop amplifier can be replaced at a reasonable price; much lower than Pixel's price of $200.00 that a fellow group member mentioned a while ago.
>
>
> Regards
>

> Andrew
>

10130. Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 12:11:33 UTC
From: John
Topic: 10113 Message: 10130

--- In loopantennas@yahoogroups.com, "kkyahoo" <kkyahoo@...> wrote:
>
> Andrew,
>
> I assumed suburban path conditions, if I assume the same sort of ground conductivity found in my locale then I also get around the 12dBm level. This is a 2.5volt peak to peak signal in a 50 ohm circuit so the back to back protection diodes, if fitted, will be working overtime, so a definite no no. I would imagine the bandswitching diodes would be having a hard time too.
>
> I understand that the Pixel has a high gain amp and so I think that there would be issues with this model when using it so close to the MW tx.
>
> 73 Kevin
>
>
> ----- Original Message -----
> From: Andrew Ikin
> To: loopantennas@yahoogroups.com
> Sent: Friday, September 13, 2013 7:45 PM
> Subject: Re: Re: [loopantennas] Wellbrook Loop ALA1530
> Andrew, Kevin, etc,
My Pro-1A came with a trio of inline (F/F male & female connectors) 6db & 10db attenuator pads for possible use under such conditions as you described. Although they are not listed in the current Pixel site instruction sheet for the Pro-1B, they are clearly viewable in the poly bag of accessories in their picture.

I don't think you can go wrong with either loop - there are just too many 'happy campers' using them. Kevin, you may just benefit by using RG-6 Quad cable with F connectors and BNC/UHF to F connector adapters to lessen cable pickup of that MW powerhouse at least for the long run to your loop, should you choose the Wellbrook. Even my Lowe HF-150, an aluminum brick with a radio in it, picked up PC hash via a six foot made up BNC/BNC(molded connectors) & generic RG-58, admittedly run behind my LCD monitor. A switch to RG-6 Quad eliminated that RFI. The Palstar R30A (The Lowe was on top of it!) still had some RFI, but it was next to the monitor. It has sub-par shielding itself, cured here by putting it across the room on an empty desk.

I had a 50kw 850 kHz daytimer with multiple towers a couple of miles from my previous home - and I was in a major near-field lobe. My Pixel loop was up there for 2.5 yr with no problems. I am now another couple of miles removed from it - and with another mountain between us as well. Still, the R30A's S-meter gives it a 40+ db/S9 - and splatter from 830-870 kHz in the daytime, but I recall my old Collins R390A having more problems with that station using my old 165 foot lw. I am happy with the loop's pickup as-is or I'd go into the attic and null that powerhouse! Choices...

Best,

John

10131. Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 12:31:54 UTC
From: kkyahoo
Topic: 10113 Message: 10131

John,

Where do the attenuators get fitted in a Pixel system? Is it in between the loop and the amp?

73 Kevin

----- Original Message -----
From: John
To: loopantennas@yahoogroups.com
Sent: Saturday, September 14, 2013 1:11 PM
Subject: Re: [loopantennas] Wellbrook Loop ALA1530

--- In loopantennas@yahoogroups.com, "kkyahoo" <kkyahoo@...> wrote:
>
> Andrew,
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> I assumed suburban path conditions, if I assume the same sort of ground conductivity found in my locale then I also get around the 12dBm level. This is a 2.5volt peak to peak signal in a 50 ohm circuit so the back to back protection diodes, if fitted, will be working overtime, so a definite no no. I would imagine the bandswitching diodes would be having a hard time too.
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> 73 Kevin
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> From: Andrew Ikin
> To: loopantennas@yahoogroups.com
> Sent: Friday, September 13, 2013 7:45 PM
> Subject: Re: Re: [loopantennas] Wellbrook Loop ALA1530
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Best,

John

10132. Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 12:36:46 UTC
From: kkyahoo
Topic: 10113 Message: 10132

Yahoo seems to be eating messages again so here is a reply to your post John about the Wellbrook head amp:

John,

I recently replaced a 1530 head amp on my vintage 1999 Wellbrook loop. I just took the screws out and twisted the old head amp until it became free. The preferred method is to use a junior hacksaw and remove it that way. You might find some old potting compound in the ends of the loop but this just comes out with a bit of effort with a screwdriver. The new amp is already potted, no need to mess around.

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G8LYV
----- Original Message -----
From: John
To: loopantennas@yahoogroups.com
Sent: Saturday, September 14, 2013 1:11 PM
Subject: Re: [loopantennas] Wellbrook Loop ALA1530

--- In loopantennas@yahoogroups.com, "kkyahoo" <kkyahoo@...> wrote:
>
> Andrew,
>
> I assumed suburban path conditions, if I assume the same sort of ground conductivity found in my locale then I also get around the 12dBm level. This is a 2.5volt peak to peak signal in a 50 ohm circuit so the back to back protection diodes, if fitted, will be working overtime, so a definite no no. I would imagine the bandswitching diodes would be having a hard time too.
>
> I understand that the Pixel has a high gain amp and so I think that there would be issues with this model when using it so close to the MW tx.
>
> 73 Kevin
>
>
> ----- Original Message -----
> From: Andrew Ikin
> To: loopantennas@yahoogroups.com

> Sent: Friday, September 13, 2013 7:45 PM
> Subject: Re: Re: [loopantennas] Wellbrook Loop ALA1530
> Andrew, Kevin, etc,
My Pro-1A came with a trio of inline (F/F male & female connectors) 6db & 10db attenuator pads for possible use under such conditions as you described. Although they are not listed in the current Pixel site instruction sheet for the Pro-1B, they are clearly viewable in the poly bag of accessories in their picture.

I don't think you can go wrong with either loop - there are just too many 'happy campers' using them. Kevin, you may just benefit by using RG-6 Quad cable with F connectors and BNC/UHF to F connector adapters to lessen cable pickup of that MW powerhouse at least for the long run to your loop, should you choose the Wellbrook. Even my Lowe HF-150, an aluminum brick with a radio in it, picked up PC hash via a six foot made up BNC/BNC(molded connectors) & generic RG-58, admittedly run behind my LCD monitor. A switch to RG-6 Quad eliminated that RFI. The Palstar R30A (The Lowe was on top of it!) still had some RFI, but it was next to the monitor. It has sub-par shielding itself, cured here by putting it across the room on an empty desk.

I had a 50kw 850 kHz daytimer with multiple towers a couple of miles from my previous home - and I was in a major near-field lobe. My Pixel loop was up there for 2.5 yr with no problems. I am now another couple of miles removed from it - and with another mountain between us as well. Still, the R30A's S-meter gives it a 40+ db/S9 - and splatter from 830-870 kHz in the daytime, but I recall my old Collins R390A having more problems with that station using my old 165 foot lw. I am happy with the loop's pickup as-is or I'd go into the attic and null that powerhouse! Choices...

Best,

John

10133. Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 12:55:12 UTC
From: John
Topic: 10113 Message: 10133

--- In loopantennas@yahoogroups.com, "kkyahoo" <kkyahoo@...> wrote:
>
> John,
>
> Where do the attenuators get fitted in a Pixel system? Is it in between the loop and the amp?
>
> 73 Kevin
>
Kevin,

No - they go between the power inserter and the receiver. They can be used in series, but I don't recall if there are two 6db and one 10db pad or vice versa. I haven't found them yet - or lots of things - since the move. More boxes...

Best

John

10134. Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-14 13:19:54 UTC
From: John
Topic: 10113 Message: 10134

Hello, Dominique!

First - did you buy your Pro-1A used in January? The Pro-1B has been out now for over two years. Perhaps your Pixel loop was defective? No matter - I would choose the less expensive, in initial equipment and shipping costs, Wellbrook, too if I lived in Europe! In light of the Pixel's now 500 U$D cost - plus shipping - the Wellbrook would look good to me, too - if I wasn't happy with my Pixel.

Secondly... folks still use LORAN-C?? Even cellphones and cameras now have GPS receivers! Wow!! I guess it's like the aeronautical NDB's - there are still a few of them around. Enjoy your receiving.

Best
John

--- In loopantennas@yahoogroups.com, "Dominique Kremp" <dominique.kremp@...> wrote:
>
> Hi John & all,
>
> I purchased a Pixel Pro-1A in January and could compare it to my 6 Wellbrook
> loops (ALA1530 (2x), ALA100, ALA100M, AVA100, LFL1010).
> As I have a very uncomfortable pest close to my QTH (12km / bat. 7mi) i.e. a
> LORAN-C transmitter (LESSAY/Normandy) which sends 250kW on 100kHz from a
> 250m high tower 24 hours a day, you can imagine that the tests are quite
> hard to pass for the antennas whatever they are!
> I can say the Wellbrook loops always were the best ones in terms of S/N and
> sensivity, not only in the VLF and NDB band !
> I sold the Pixel Pro-1A. You understand why !
>
> Here is a very comprehensive test from Guy Atkins between the PIXEL and the
> ALA1530 loops.
> http://tinyurl.com/qj343fz
>
> I fully agree with his conclusions.
> Have a nice day
>
> Dominique
> Normandy, France

10135. Loran

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 08:39:06 UTC
From: Tracey Gardner
Topic: 10113 Message: 10135

Hello John

Where have you been hiding :-)
I'm aware that the US have switched Loran C off, but over here in Europe
we're implementing an Enhanced Loran (e-Loran) system
Being totally dependent on GPS has not got to be a good idea.

http://en.wikipedia.org/wiki/LORAN#United_Kingdom_eLORAN_implementation

Regards

Tracey

----- Original Message -----
From: "John" <JRTOW3RD@...>
To: <loopantennas@yahoogroups.com>
Sent: Saturday, September 14, 2013 2:19 PM
Subject: [loopantennas] Re: Wellbrook Loop ALA1530

> Hello, Dominique!
>
> First - did you buy your Pro-1A used in January? The Pro-1B has been out
> now for over two years. Perhaps your Pixel loop was defective? No matter -
> I would choose the less expensive, in initial equipment and shipping
> costs, Wellbrook, too if I lived in Europe! In light of the Pixel's now
> 500 U$D cost - plus shipping - the Wellbrook would look good to me, too -
> if I wasn't happy with my Pixel.
>
> Secondly... folks still use LORAN-C?? Even cellphones and cameras now have
> GPS receivers! Wow!! I guess it's like the aeronautical NDB's - there are
> still a few of them around. Enjoy your receiving.
>
> Best
> John
>
>

10136. RE: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 10:02:27 UTC
From: Dominique Kremp
Topic: 10113 Message: 10136

Hi John,

Sorry, I was wrong abt. the Pixel type, it was the Pro-1B !
It was a brand new stuff, I'm sure abt that !

Concerning the price difference between the Pixel and the Wellbrook antennas, bear in mind that a member of the Loop antennas Group said Pixel wanted 200 bucks for a new amplifier while a new one for an ALA1530 costs approx. only" 90$ (including shipping to the US) !

As for the LORAN-C, I can imagine that you as a North-American are a bit puzzled and don't understand that it's still in use in Europe as we all use it with our cellphones, our cameras and our cars.
The reason is that Europe is entirely dependent of the US concerning the GPS system. If the US administration for any reason turns off the GPS'tap or even if the system gets failing, Europe will be left high and dry !!!
As long as Europe doesn't have its own global satellite navigation system (called Galileo), the LORAN-C system will be used because it's a matter of security for aircrafts and ships navigation.
More infos there:
http://www.esa.int/Our_Activities/Navigation/The_future_-_Galileo/Why_Europe_needs_Galileo

Hope it helps

Have a nice day

Dominique
Normandy, France

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de John
Envoyé : samedi 14 septembre 2013 15:20
À : loopantennas@yahoogroups.com
Objet : [loopantennas] Re: Wellbrook Loop ALA1530

Hello, Dominique!

First - did you buy your Pro-1A used in January? The Pro-1B has been out now for over two years. Perhaps your Pixel loop was defective? No matter - I would choose the less expensive, in initial equipment and shipping costs, Wellbrook, too if I lived in Europe! In light of the Pixel's now 500 U$D cost - plus shipping - the Wellbrook would look good to me, too - if I wasn't happy with my Pixel.

Secondly... folks still use LORAN-C?? Even cellphones and cameras now have GPS receivers! Wow!! I guess it's like the aeronautical NDB's - there are still a few of them around. Enjoy your receiving.

Best
John

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>
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>
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> Wellbrook loops (ALA1530 (2x), ALA100, ALA100M, AVA100, LFL1010).
> As I have a very uncomfortable pest close to my QTH (12km / bat. 7mi)
> i.e. a LORAN-C transmitter (LESSAY/Normandy) which sends 250kW on
> 100kHz from a 250m high tower 24 hours a day, you can imagine that the
> tests are quite hard to pass for the antennas whatever they are!
> I can say the Wellbrook loops always were the best ones in terms of
> S/N and sensivity, not only in the VLF and NDB band !
> I sold the Pixel Pro-1A. You understand why !
>
> Here is a very comprehensive test from Guy Atkins between the PIXEL
> and the
> ALA1530 loops.
> http://tinyurl.com/qj343fz
>
> I fully agree with his conclusions.
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> Dominique
> Normandy, France

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http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
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You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!Yahoo! Groups Links

10137. RE: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 10:11:49 UTC
From: Dominique Kremp
Topic: 10113 Message: 10137

As for my previous mail, here is again the link to the Galileo website:
http://tinyurl.com/ou9vyeb

Dominique

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de John
Envoyé : samedi 14 septembre 2013 15:20
À : loopantennas@yahoogroups.com
Objet : [loopantennas] Re: Wellbrook Loop ALA1530

Hello, Dominique!

First - did you buy your Pro-1A used in January? The Pro-1B has been out now for over two years. Perhaps your Pixel loop was defective? No matter - I would choose the less expensive, in initial equipment and shipping costs, Wellbrook, too if I lived in Europe! In light of the Pixel's now 500 U$D cost - plus shipping - the Wellbrook would look good to me, too - if I wasn't happy with my Pixel.

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Best
John

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> As I have a very uncomfortable pest close to my QTH (12km / bat. 7mi)
> i.e. a LORAN-C transmitter (LESSAY/Normandy) which sends 250kW on
> 100kHz from a 250m high tower 24 hours a day, you can imagine that the
> tests are quite hard to pass for the antennas whatever they are!
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> S/N and sensivity, not only in the VLF and NDB band !
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>
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And please trim all this when replying!Yahoo! Groups Links

10138. Re: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 12:36:25 UTC
From: toddroberts2001@...
Topic: 10113 Message: 10138

Can one purchase just the ALA1530LF headamp from Wellbrook and build their own loop for it? I don't see just the headamp listed on their webpages so I wonder if
someone can buy one special order or do they sell them only as replacements for someone who already has one of their loops? I would need both the headamp and
the matching power inserter. Thanks for any info.

73 Todd WD4NGG

10139. Re: [loopantennas] Loran

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 13:27:41 UTC
From: Chris Trask
Topic: 10113 Message: 10139

```
>
>Where have you been hiding :-)
>I'm aware that the US have switched Loran C off, but over here in Europe
>we're implementing an Enhanced Loran (e-Loran) system
>Being totally dependent on GPS has not got to be a good idea.
>
>http://en.wikipedia.org/wiki/LORAN#United_Kingdom_eLORAN_implementation
>
```

I notice that they made no mention of the Omega system. It was an alternative LF system similar to Loran, and it was worthless. The receivers we had on the USAF C-130s at the time continually broke lock. I don't know if that system even exists any more.

Chris

10140. Re: [loopantennas] Loran

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 15:43:05 UTC
From: Tracey Gardner
Topic: 10113 Message: 10140

No according to Wiki it was closed down in 1997, although the Russian Alpha system is still active.

Tracey

----- Original Message -----
From: "Chris Trask" <christrask@...>
To: <loopantennas@yahoogroups.com>; <loopantennas@yahoogroups.com>
Sent: Sunday, September 15, 2013 2:27 PM
Subject: Re: [loopantennas] Loran

> >
>>Where have you been hiding :-)
>>I'm aware that the US have switched Loran C off, but over here in Europe
>>we're implementing an Enhanced Loran (e-Loran) system
>>Being totally dependent on GPS has not got to be a good idea.
>>
>>http://en.wikipedia.org/wiki/LORAN#United_Kingdom_eLORAN_implementation
>>
>
> I notice that they made no mention of the Omega system. It was an
> alternative LF system similar to Loran, and it was worthless. The
> receivers we had on the USAF C-130s at the time continually broke lock. I
> don't know if that system even exists any more.
>
>
> Chris
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
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>
> Post files here. If the file comes from a website, please put it in the
> Links rather than uploading the file.
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> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>

>
>
> -----
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2013.0.3408 / Virus Database: 3222/6666 - Release Date: 09/14/13
>

10141. Re: [loopantennas] Loran

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 15:54:51 UTC
From: Chris Trask
Topic: 10113 Message: 10141

```
>
>>
>> I notice that they made no mention of the Omega system. It was an
>> alternative LF system similar to Loran, and it was worthless. The
>> receivers we had on the USAF C-130s at the time continually broke lock. I
>> don't know if that system even exists any more.
>>
>
>
>No according to Wiki it was closed down in 1997, although the Russian Alpha
>system is still active.
>
```

Good riddance. My most memorable experience with it was a trip from Nellis AFB to Harrisburg PA. We did not have a navigator with us, so I substituted as I knew how to work most of the position (as well as flight engineer). We went through a cold front over Colorado and the Omega immediately broke lock. I had to use the Doppler drop radar as a backup, and when we got to Harrisburg I was off by just 1/4 mile.

Wish I had taken the opportunity to learn how to use the sextant.

Chris

10142. Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 15:59:26 UTC
From: kkyahoo
Topic: 10113 Message: 10142

Kraig,

I looked at the group page as I was not getting all the postings delivered to my email address. I noticed that you had left some details of your local MW tx. Apparently it is only 5kW and has a directional beam so as long as you are not in the wrong direction you will find the signals a lot lower than have been previously advised.

Assuming 5kw radiated in your direction, a frequency of 1460 kHz and the ground conductivity in that area of the US, you should see a field strength of around 65 mV/M or 96dBu. I am not sure what the antenna factor of the Pixel is but the Wellbrook standard 1530 is 5dB, so you will get 36 mV or -16dBm into your receiver. Still a big signal but your rx should be able to handle it, ideally with the preamp switched out.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Thursday, September 12, 2013 5:02 PM
Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

□
Kraig,

The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com

Sent: Thursday, September 12, 2013 3:09 PM
Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10143. Re: [loopantennas] Loran

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-16 09:01:32 UTC
From: Andy Gardner
Topic: 10113 Message: 10143

On 16/09/2013, at 1:27 AM, Chris Trask wrote:

>
> I notice that they made no mention of the Omega system. It was an alternative LF system similar to Loran, and it was worthless. The receivers we had on the USAF C-130s at the time continually broke lock. I don't know if that system even exists any more.
>

They list it in the "see also" section at the bottom.

Loran is mentioned on the Omega page also.

http://en.wikipedia.org/wiki/OMEGA_Navigation_System

"Omega was shut down permanently 30 September 1997."

10144. Re: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-15 20:01:41 UTC
From: clement F59465
Topic: 10113 Message: 10144

Hi to all, hi Todd,

Yes, of course without the loop, there are two versions.

Here:

http://www.wellbrook.uk.com/antennashop/index.php?route=product/product&path=35&product_id=48

http://www.wellbrook.uk.com/antennashop/index.php?route=product/product&path=35&product_id=61

73'
Regards
F59465 Clem

2013/9/15 <toddroberts2001@...>

> **
>
>
> **
> Can one purchase just the ALA1530LF headamp from Wellbrook and build their
> own loop for it? I don't see just the headamp listed on their webpages so
> I wonder if
> someone can buy one special order or do they sell them only as replacements
> for someone who already has one of their loops? I would need both the
> headamp and
> the matching power inserter. Thanks for any info.
>
> 73 Todd WD4NGG
>
>
>

--

73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube <http://www.youtube.com/F59465swl>

10145. RE: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-17 16:11:16 UTC
From: <kg4lac@...>
Topic: 10113 Message: 10145

Kevin,
Thanks. Based on the input I'll probably purchase the Imperium version as I believe my rx will handle any potential overload fro 1460 kHz.

Wish YG would allow me to remove prior comments when I reply so as to avoid a lengthy response.

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

□
Kraig,

I looked at the group page as I was not getting all the postings delivered to my email address. I noticed that you had left some details of your local MW tx. Apparently it is only 5kW and has a directional beam so as long as you are not in the wrong direction you will find the signals a lot lower than have been previously advised.

Assuming 5kw radiated in your direction, a frequency of 1460 kHz and the ground conductivity in that area of the US, you should see a field strength of around 65 mV/M or 96dBu. I am not sure what the antenna factor of the Pixel is but the Wellbrook standard 1530 is 5dB, so you will get 36 mV or -16dBm into your receiver. Still a big signal but your rx should be able to handle it, ideally with the preamp switched out.

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Kevin

----- Original Message -----

From: kg4lac@...

To: loopantennas@yahoogroups.com

Sent: Thursday, September 12, 2013 5:02 PM

Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

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Kraig,

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----- Original Message -----

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Sent: Thursday, September 12, 2013 3:09 PM

Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

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Kraig

10146. Re: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-17 16:45:17 UTC
From: kkyahoo
Topic: 10113 Message: 10146

Kraig,

I did my calculations based on the standard 1530. The Imperium will give you 9dB more signal into your rx. What I did was to get the standard 1530 which comes with the straight through interface unit/power inserter and a while later bought the Imperium interface unit which has the 9dB amplifier built in it. The loop and head amp are identical for both models. I recall Andrew suggested the 1530LF, they are all good.

I guess you can get a good feel for the strength of the 1460k signal from your existing system.

I just asked Pixel for a quote for their loop. Including shipping to the UK it was $600. With import duty and tax this is going to be over $700! Ouch.

73

Kevin

----- Original Message -----
From: kg4lac@...
To: loopantennas@yahoogroups.com
Sent: Tuesday, September 17, 2013 5:11 PM
Subject: RE: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,

Thanks. Based on the input I'll probably purchase the Imperium version as I believe my rx will handle any potential overload fro 1460 kHz.

Wish YG would allow me to remove prior comments when I reply so as to avoid a lengthy response.

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Kraig

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96dBu. I am not sure what the antenna factor of the Pixel is but the Wellbrook standard 1530 is 5dB, so you will get 36 mV or -16dBm into your receiver. Still a big signal but your rx should be able to handle it, ideally with the preamp switched out.

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----- Original Message -----
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Sent: Thursday, September 12, 2013 3:09 PM
Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10147. Pixel Loop Amplifier Repair Charges

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-17 18:38:09 UTC
From: <Jack.Smith@...>
Topic: 10147 Message: 10147

There has been some incorrect information circulated in this group concerning the repair cost for Pixel Pro-1 loop amplifier after the warranty period.

I spoke with Doug Talley at Pixel about the subject and he asked me to pass along Pixel's response to the group.

1) A Pro-1 loop owner can return his amplifier module for repair at a price of $100. A new amplifier board will be installed in the old enclosure and returned to the customer. (I believe a small separate charge is made for return shipping.)

2) The $200 price quoted is for a new loop module, consisting of a loop amplifier board and new enclosure, as might be purchased for an on-the-shelf spare or for some other purpose.

Jack K8ZOA
www.cliftonlaboratories.com (http://www.cliftonlaboratories.com)

10148. RE: Re: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-17 19:12:38 UTC
From: <kg4lac@...>
Topic: 10113 Message: 10148

Kevin,
Yes, Andrew suggested the 1530LF. I was planning for the future in case we either move or 1460 kHz leaves the air.

Is it possible to turn on/turn off the 9dB amp built into the Imperium version? If so, then I could turn on or off as needed.

73,

Kraig

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

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Kraig,

I did my calculations based on the standard 1530. The Imperium will give you 9dB more signal into your rx. What I did was to get the standard 1530 which comes with the straight through interface unit/power inserter and a while later bought the Imperium interface unit which has the 9dB amplifier built in it. The loop and head amp are identical for both models. I recall Andrew suggested the 1530LF, they are all good.

I guess you can get a good feel for the strength of the 1460k signal from your existing system.

I just asked Pixel for a quote for their loop. Including shipping to the UK it was $600. With import duty and tax this is going to be over $700! Ouch.

73

Kevin

----- Original Message -----

From: kg4lac@...

To: loopantennas@yahoogroups.com

Sent: Tuesday, September 17, 2013 5:11 PM

Subject: RE: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,

Thanks. Based on the input I'll probably purchase the Imperium version as I believe my rx will handle any potential overload fro 1460 kHz.

Wish YG would allow me to remove prior comments when I reply so as to avoid a lengthy response.

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Kraig,

I looked at the group page as I was not getting all the postings delivered to my email address. I noticed that you had left some details of your local MW tx. Apparently it is only 5kW and has a directional beam so as long as you are not in the wrong direction you will find the signals a lot lower than have been previously advised.

Assuming 5kw radiated in your direction, a frequency of 1460 kHz and the ground conductivity in that area of the US, you should see a field strength of around 65 mV/M or 96dBu. I am not sure what the antenna factor of the Pixel is but the Wellbrook standard 1530 is 5dB, so you will get 36 mV or -16dBm into your receiver. Still a big signal but your rx should be able to handle it, ideally with the preamp switched out.

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Kevin

----- Original Message -----

From: kg4lac@...

To: loopantennas@yahoogroups.com

Sent: Thursday, September 12, 2013 5:02 PM

Subject: RE: Re: [loopantennas] Wellbrook Loop ALA1530

Kevin,
Thanks for the input. I have a local MW station about 2.6 miles from my QTH. Will this local MW station cause problems with the Imperium version?

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The reviews point to the Wellbrook being better than the Pixel. I have not tried the Pixel but I do have 3 ALA1530s and they are very good. Pretty much bombproof, low noise, and very good nulls. The latest incarnation of the 1530 is the best yet and you can always upgrade it later to the Imperium version that has more gain and better intermod performance.

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----- Original Message -----

From: kg4lac@...

To: loopantennas@yahoogroups.com

Sent: Thursday, September 12, 2013 3:09 PM

Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10149. Re: Re: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-17 20:10:22 UTC
From: Andrew Ikin
Topic: 10113 Message: 10149

Kraig,

The Interface Norton Amplifier is not switchable. But I guess if you use 10dB Rx attenuation; this should be similar as having the loop with a passive Interface. I could free issue a passive interface if you need one. Also I have a couple special Clifton Labs MW filters (switchable) that can be inserted between the Antenna Interface and loop feeder. However, I would have to charge for this.

73

Andrew

Kevin,
Yes, Andrew suggested the 1530LF. I was planning for the future in case we either move or 1460 kHz leaves the air.

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Subject: [loopantennas] Wellbrook Loop ALA1530

Any opinions, either pro or con, on the Wellbrook Loop ALA1530 antenna?

Thanks.

Kraig

10150. Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 01:30:29 UTC
From: Andy Gardner
Topic: 10113 Message: 10150

The only time I go to the Yahoo Groups web interface is when I want to search old messages, look at photos or files, or hunt down a new group.

Day to day interaction is via my mail client (in this case "Mail" on Mac OSX). And I specified text only messages. That gives you a semi Usenet NNTP feel. :^)

I recommend those of you that loathe "Neo", like I do, try moving to the text-only email interface.

Cheers,

Andy
ZL3APG

On 18/09/2013, at 4:11 AM, <kg4lac@...> <kg4lac@...> wrote:

>
>
> Wish YG would allow me to remove prior comments when I reply so as to avoid a lengthy response.
>

10151. RE: Re: Re: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-17 20:28:08 UTC
From: <atm_ken_hunter@...>
Topic: 10113 Message: 10151

Couldn't one build a simple series L/C circuit across the loop termination to attenuate the offending TX?
Ken - KB7H

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

Kraig,

The Interface Norton Amplifier is not switchable. But I guess if you use 10dB Rx attenuation; this should be similar as having the loop with a passive Interface. I could free issue a passive interface if you need one. Also I have a couple special Clifton Labs MW filters (switchable) that can be inserted between the Antenna Interface and loop feeder. However, I would have to charge for this.

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Thanks.

Kraig

10152. Re: [loopantennas] Pixel Loop Amplifier Repair Charges

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 08:41:57 UTC
From: kkyahoo
Topic: 10147 Message: 10152

Jack,

That seems expensive, I recall my replacement Wellbrook headamp was £50 gbp shipped which is $79.50 at todays fx rate.

73

Kevin

----- Original Message -----
From: Jack.Smith@...
To: loopantennas@yahoogroups.com
Sent: Tuesday, September 17, 2013 7:38 PM
Subject: [loopantennas] Pixel Loop Amplifier Repair Charges

There has been some incorrect information circulated in this group concerning the repair cost for Pixel Pro-1 loop amplifier after the warranty period.

I spoke with Doug Talley at Pixel about the subject and he asked me to pass along Pixel's response to the group.

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2) The $200 price quoted is for a new loop module, consisting of a loop amplifier board and new enclosure, as might be purchased for an on-the-shelf spare or for some other purpose.

Jack K8ZOA

www.cliftonlaboratories.com

10153. Re: [loopantennas] Pixel Loop Amplifier Repair Charges

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 09:34:58 UTC
From: Jack Smith
Topic: 10147 Message: 10153

Kevin:

Feel free to take that up with Pixel - I don't set prices, I was just passing along the information. And the difference between $80 and $100 isn't all that much.

Jack K8ZOA

On 9/18/2013 4:41 AM, kkyahoo wrote:
>
> □
>
> Jack,
> That seems expensive, I recall my replacement Wellbrook headamp was
> £50 gbp shipped which is $79.50 at todays fx rate.
> 73
> Kevin
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> ----- Original Message -----
> *From:* Jack.Smith@... <mailto:Jack.Smith@...>
> *To:* loopantennas@yahoogroups.com
> <mailto:loopantennas@yahoogroups.com>
> *Sent:* Tuesday, September 17, 2013 7:38 PM
> *Subject:* [loopantennas] Pixel Loop Amplifier Repair Charges
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> Jack K8ZOA
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>

>

10154. Re: [loopantennas] Pixel Loop Amplifier Repair Charges

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 10:02:02 UTC
From: kkyahoo
Topic: 10147 Message: 10154

Thanks Jack,

I understand. The comparison is really between the new Pixel amp at $200 vs the new Wellbrook headamp at $80. The gap widens when you look at the cost for a European buyer as we get hit with VAT and import duty which, with shipping, will push the cost up to something like $275.

73

Kevin

----- Original Message -----
From: Jack Smith
To: loopantennas@yahoogroups.com
Sent: Wednesday, September 18, 2013 10:34 AM
Subject: Re: [loopantennas] Pixel Loop Amplifier Repair Charges

Kevin:

Feel free to take that up with Pixel - I don't set prices, I was just passing along the information. And the difference between $80 and $100 isn't all that much.

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Jack K8ZOA

www.cliftonlaboratories.com

10155. Re: Re: Re: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 10:10:05 UTC
From: Andrew Ikin
Topic: 10113 Message: 10155

Ken wrote on Sept. 18.

<SNIP>

"Couldn't one build a simple series L/C circuit across the loop termination to attenuate the offending TX?

Ken - KB7H"

Ken, the L/C circuit would have to provide shunt z of approx. 1 Ohm or less because it is across a loop/Amplifier z of about 12 Ohms at 1420kHz. Also one would have to experiment to see if the loops responce at other frequencies isn't affected. However, Your idea may work with a ALA100 or the ALA100M as these use higher input z amplifiers.

73

Andrew

10156. Re: [loopantennas] Pixel Loop Amplifier Repair Charges

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 10:19:29 UTC
From: Jack Smith
Topic: 10147 Message: 10156

Can I purchase a new Wellbrook amp for $80 even though I am not an owner of a Wellbrook loop? Or is it the price for a loop owner needing a repair? If the former, I should buy a dozen of the amps, bend up a few dollars of aluminum and I have a $100 Wellbrook loop for sale in competition with Wellbrook. (DC power injector would have to be added, of course.)

About 20-25% of my Clifton Laboratories business is international, a large majority of which is to Europe and I know about the problems of those sales. Shipping and VAT are expensive. Fortunately duty is generally not charged in most countries where the goods being imported are for amateur radio use. But 20% VAT will be above the small exemption, which in the UK I recall as being around US$ 20.

On the other hand, goods brought into the US from Europe for personal use are given a reasonable exemption and I've never been charged duty on anything shipped from Europe or China or other countries to me. And the US does not have VAT (yet, although it's proposed every now and then), so other than shipping, anything bought in the UK and shipped to the US comes in without additional charge beyond shipping in nearly every case. And, since UK and European prices are normally stated (by law in most countries as I understand it) as inclusive of VAT, and since VAT is remitted on export sales, it's often cheaper for me to purchase something from Europe and have it shipped to me than it is for a local European customer to buy the same item locally.

The problem in this is how various government set up their tax systems and how it can be tilted to encourage exports and discourage imports. The seller, not to mention the customer, is at the mercy of that system.

I should add that I am asked for a surprisingly large number of Euopean customers to put a false (low) value on the goods or to identify them as "gifts" to avoid VAT. That would put me at risk as it is a false customs declaration and I won't do that.

Jack K8ZOA

On 9/18/2013 6:02 AM, kkyahoo wrote:
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> Thanks Jack,
> I understand. The comparison is really between the new Pixel amp at
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> *From:* Jack Smith <mailto:Jack.Smith@...>
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10157. Re: [loopantennas] Pixel Loop Amplifier Repair Charges

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 11:07:12 UTC
From: kkyahoo
Topic: 10147 Message: 10157

Jack,

The real ripoff in the VAT system is that it gets charged on top of the product price and the shipping, and at 20% in the UK that is just crazy. Then there is the handling/admin charge from the importer to process the product through customs. The import duty is tiny; sometimes I get hit with it sometimes not. You have to make sure the correct commodity code is plastered all over the shipping container in big writing. If items are dual use customs can decide to hit you with import duty if they feel like it.

73

Kevin

G8LYV

----- Original Message -----
From: Jack Smith
To: loopantennas@yahoogroups.com
Sent: Wednesday, September 18, 2013 11:19 AM
Subject: Re: [loopantennas] Pixel Loop Amplifier Repair Charges

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www.cliftonlaboratories.com

10158. RE: [loopantennas] Re: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 14:29:27 UTC
From: Dominique Kremp
Topic: 10113 Message: 10158

Just picked up from another Yahoo group:

"A short video showing the differences between an unbalanced single wire antenna and the ALA1530 loop. The OM uses a currently popular "piece of wire +a step-down transformer in a box" at the connection, better known as 'End-fed' antenna.

The End-fed suffers from severe local noise pick-up, whereas the Wellbrook ALA1530 shows clear reception vs zilt at the popular wire.

Nothing new learned here !"

http://www.youtube.com/watch?feature=player_embedded
<http://www.youtube.com/watch?feature=player_embedded&v=ZEwzUJJAY-I>
&v=ZEwzUJJAY-I

Dominique

Normandy, France

10159. Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-18 20:38:49 UTC
From: <nick.nickrumple@...>
Topic: 10159 Message: 10159

Hi All...I have a question about tuned magnetic loops. I have constructed a homebrew loop antenna from 1/2 inch copper pipe. The main loop diameter is 40 inches (~1 meter), and the pickup loop diameter is 8 inches (1/5 of the main loop). My question is : What is the feed point impedance of the pickup loop and do I need to use a balun to match to 50 ohm receivers? It works quite well without a balun, but I was wondering if it could be improved with one.

Thanks For Any Help
Nick Rumple
nickrumple@yahoo.com

10160. Re: [loopantennas] Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-19 02:09:49 UTC
From: Andy
Topic: 10159 Message: 10160

I believe the reason for the 5:1 loop diameter ratio, was to get to the ballpark of a 50 ohm feed impedance. I think it does vary as you change the orientation of the pickup loop, and/or change its shape.

I've seen mention that a 1:1 balun would be best between coax and the pickup loop, but that you can do without one.

Andy

10161. RE: Re: Re: Re: Re: Re: [loopantennas] Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-19 02:40:50 UTC
From: <atm_ken_hunter@...>
Topic: 10113 Message: 10161

An alternative would be to place a resonant parallel circuit in series with the signal path, probably after the preamp or input transformer... This would also introduce some loss but might be fun to experiment with the idea. I remember ages ago building tunable traps for BCB harmonic rejection. They seemed to do the trick then...

Ken - KB7H

--- In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

☐
Ken wrote on Sept. 18.

<SNIP>

"Couldn't one build a simple series L/C circuit across the loop termination to attenuate the offending TX?

Ken - KB7H"

Ken, the L/C circuit would have to provide shunt z of approx. 1 Ohm or less because it is across a loop/Amplifier z of about 12 Ohms at 1420kHz. Also one would have to experiment to see if the loops responce at other frequencies isn't affected. However, Your idea may work with a ALA100 or the ALA100M as these use higher input z amplifiers.

73

Andrew

10162. RE: Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-19 18:56:17 UTC
From: <3ym3ym@...>
Topic: 10159 Message: 10162

I think the pickup loop itself can be seen as the secondary winding of a balun (main loop is the primary). Don't see why you would need yet another balun when there is already one. As for the impedance, in my experience 1m main loop + 20cm pickup loop gives me a good SWR on 40m and 30m. Not so good on 20m or 80m. This tells me the impedance changes quite a bit with the band.
For receive only you probably don't care about the precise matching, it will not affect the number of stations you can hear.

73, Mike

--- In loopantennas@yahoogroups.com, <ai.egrps@...> wrote:

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Andy

10163. Re: [loopantennas] RE: Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-19 22:03:28 UTC
From: Andy
Topic: 10159 Message: 10163

3ym3ym@... wrote:

> I think the pickup loop itself can be seen as the secondary winding of a
> balun (main loop is the primary). Don't see why you would need yet
> another balun when there is already one.

That's what I used to think too. But I have read otherwise. And it makes at least some sense that having an unbalanced pickup loop near the main loop upsets the balance in the main loop too, which could mess up the depth of the nulls. That was specifically given as the reason why the pickup loop wants to be kept balanced too. Your magloop will work without the balun, but it may lack the sharp nulls of a well balanced loop.

Andy

10164. Re: [loopantennas] RE: Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-21 08:53:37 UTC
From: vk2tti@...
Topic: 10159 Message: 10164

G'day all. I have ben following the loopantenna saga. I do not use pickup loops anymore. Prefer to use a capacitor to tune the loop and another variable to match the impedance to the radio. What I pick up on the swings I lose on the roundabouts, the loop becomes unbalanced the radiation pattern is distorted and the impedance is sensitive to the size of the Loop. However I am aware of the shortcomings and live with it The old 80/20 rule applies 20% of effort will get a you 80% return but that last 20% return will only be got with another 80% of effort. Regards to all Max VK2TTI

----- Original Message -----
From: loopantennas@yahoogroups.com
To:
Cc:
Sent:Thu, 19 Sep 2013 18:03:28 -0400
Subject:Re: [loopantennas] RE: Question About Tuned Magnetic Loop

3ym3ym@... wrote:

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Andy

Email sent using Optus Webmail

Links:
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[1]
http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJyMjR2Z3IyBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDE2MwRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzEzNzk2MjgyNjA-?act=reply&messageNum=10163
[2]
mailto:ai.egrps@...?subject=Re%3A%20%5Bloopantennas%5D%20RE%3A%20Question%20About%20Tuned%20Magnetic%20Loop
[3]

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[7]
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[9] http://groups.yahoo.com/group/loopantennas/links
[10] http://groups.yahoo.com/group/loopantennas/files
[11] http://ph.groups.yahoo.com/group/loopantennas/photos
[12]
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[13]
mailto:loopantennas-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Traditional
[14]
mailto:loopantennas-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest
[15]
mailto:loopantennas-unsubscribe@...m?subject=Unsubscribe
[16] http://info.yahoo.com/legal/us/yahoo/utos/terms/
[17]
mailto:ygroupsnotifications@yahoogroups.com?subject=Feedback%20on%20the%20redesigned%20individual%20mail%20v1

10165. Re: [loopantennas] Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-21 23:44:03 UTC
From: Maxwell Mclellan
Topic: 10159 Message: 10165

G'day all again. Some more thoughts re main loop/pickup loop thing. If you consider them as a transformer a multi turn (say 10 turns) and a pickup loop (1 turn).Voltage (in the secondary) is reduced by 10 and the current available increased by 10 (to keep P=RI). Impedance transformation is to the square of the turns ratio, assuming a 50 ohm secondary the the primary winding will be 50 x 100= 5000 ohms. A parallel tuned loop exhibits a high impedance. If you assume a 100ohm secondary we get a transformation of a 100 x100= 10,000 ohms (I hope my Maths is right. If we consider a 1 turn loop and pickup the square of 1 is 1 ie no impedance transformation. That is why I gave away pickup loops for single turn loops. Copper pipe is good but expensive, for small loops I prefer aluminum strip, gets an oxide film but can be brushed clean with a brass wire brush. I believe (religion) that an unbalanced pickup will unbalance the system. Regards again, Max VK2TTI.
Sent from my iPad

10166. Re: [loopantennas] Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-21 23:48:19 UTC
From: Tony Magon
Topic: 10159 Message: 10166

Hi Max

Have a look at G0CWT website.

73

Tony VK2IC

On Sun, Sep 22, 2013 at 9:44 AM, Maxwell Mclellan <vk2tti@...>wrote:

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>
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> consider them as a transformer a multi turn (say 10 turns) and a pickup
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10167. Re: [loopantennas] Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-22 01:55:20 UTC
From: vk2tti@...
Topic: 10159 Message: 10167

G'day Tony and all. Thank you for the heads up re G0CWT website have gone straight to it. Very impressive video with the neon tube and the high voltage and the clamp on current measure. My youngest daughter joined the human race and went to uni studdied engineering as a mature age student, now she am be one wiff a first and second class honours to her credit. She came homn one day said " You know Dad when you try to measure something you change it! ". It seems to me that G0CWT has demonstrated that adding an unbalanced pickup loop to a tuned loop alters the theoretical current and voltage distribution expected. I would like to see the same demonstration done without the pickup loop. The problem then becomes how to excite the loop in free space! Still an interesting website. Max VK2TTI.

----- Original Message -----
From: loopantennas@yahoogroups.com
To:
Cc:
Sent:Sun, 22 Sep 2013 09:48:19 +1000
Subject:Re: [loopantennas] Question About Tuned Magnetic Loop

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[10] http://groups.yahoo.com/group/loopantennas/links
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[12] http://ph.groups.yahoo.com/group/loopantennas/photos
[13]
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[14]
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[16]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[17] http://info.yahoo.com/legal/us/yahoo/utos/terms/
[18]
mailto:ygroupsnotifications@yahoogroups.com?subject=Feedback%20on%20the%20redesigned%20individual%20mail%20v1

10168. Re: [loopantennas] Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-22 03:20:38 UTC
From: Tony Magon
Topic: 10159 Message: 10168

Hi Max and all

I have made one up for 40 meters and tried it out briefly and it worked quite well. The balun tubes can be purchased from Jaycar.

73

Tony VK2IC

On Sun, Sep 22, 2013 at 11:55 AM, <vk2tti@...> wrote:

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>
> ----- Original Message -----
> From:
> loopantennas@yahoogroups.com
>
> To:
> <loopantennas@yahoogroups.com>
> Cc:
>
> Sent:
> Sun, 22 Sep 2013 09:48:19 +1000
> Subject:
> Re: [loopantennas] Question About Tuned Magnetic Loop
>
>
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>
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> Hi Max
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> 73
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> Tony VK2IC
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> On Sun, Sep 22, 2013 at 9:44 AM, Maxwell Mclellan <vk2tti@...>wrote:
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10169. Re: [loopantennas] Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-22 11:15:04 UTC
From: Maxwell Mclellan
Topic: 10159 Message: 10169

Tony and all, I am troubled by the repeated reference to the word balun, unless I have read incorrectly, nowhere does G0CWT refer to his transformer feed as a balun! And rightly so, whether or no it affects the balance of the loop I have no way of measuring. In practice it would not matter much, if I can't hear the difference does it matter? Regards to all, Max vk2tti.

Sent from my iPad

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> To:
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> Sun, 22 Sep 2013 09:48:19 +1000
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>

10170. Hello All

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-22 16:07:33 UTC
From: <leschyna@...>
Topic: 10170 Message: 10170

Hi, I just joined this group and wanted to say hi to all... I am a big fan of loop antennas and in particular Magnetic Loop antennas. I have made many types of transmitting antennas over the 35 years that I have been a radio amateur. My specialty is magneic loop antennas (MagLoop, my brand) and free standing vertical dipoles. I hope to learn and even contribute to this group going forward.

73 Bob VE3UK

10171. RE: Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-22 18:11:46 UTC
From: <leschyna@...>
Topic: 10159 Message: 10171

No, the feed point should be very close to 50 ohms that is what the transformer is doing. However, a 1:1 balun does have its place in further limiting the noise picked up by the loop and sent to your RX via common mode.

Hope that helps.

73 Bob VE3UK

--- In loopantennas@yahoogroups.com, <vk2tti@...> wrote:

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From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
Sun, 22 Sep 2013 09:48:19 +1000
Subject:
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Tony VK2IC

On Sun, Sep 22, 2013 at 9:44 AM, Maxwell Mclellan <vk2tti@...> wrote:

G'day all again. Some more thoughts re main loop/pickup loop thing. If you consider them as a transformer a multi turn (say 10 turns) and a pickup loop (1 turn).Voltage (in the secondary) is reduced by 10 and the current available increased by 10 (to keep P=RI). Impedance transformation is to the square of the turns ratio, assuming a 50 ohm secondary the the primary winding will be 50 x 100= 5000 ohms. A parallel tuned loop exhibits a high impedance. If you assume a 100ohm secondary we get a transformation of a 100 x100= 10,000 ohms (I hope my Maths is right. If we consider a 1 turn loop and pickup the square of 1 is 1 ie no impedance transformation. That is why I gave away pickup loops for single turn loops. Copper pipe is good but expensive, for small loops I prefer aluminum strip, gets an oxide film but can be brushed clean with a brass wire brush. I believe (religion) that an unbalanced pickup will unbalance the system. Regards again, Max VK2TTI.
Sent from my iPad

Email sent using Optus Webmail

10172. Re: Hello All

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-23 04:56:05 UTC
From: Maxwell Mclellan
Topic: 10170 Message: 10172

G'day Bob,I'd be glad to hear your t'uppence worth. If no one contributes, no loopantenna group. Your years of experience are invaluable. Regards vk2tti.

Sent from my iPad

10173. Re: [loopantennas] RE: Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-23 05:05:21 UTC
From: Paramsothy Vaithia Lingham
Topic: 10159 Message: 10173

Like the guy said if you want a symmetrical & noise reduction set up the balun would help.
Bur what Thomas has done, is to use a wide band ferrite ring coupler, to give you a 50.Ohm secondary, ensuring optimum power transfer, to your receiver. If you are transmitting, it is worth worrying about, wanting a balun, to remove feeder radiation.Otherwise for listing purposes you will not notice the difference, as most broadcast stations run 10kW or more.
73s de Andy 9M2PV

On Mon, Sep 23, 2013 at 2:11 AM, <leschyna@...> wrote:

> **
>
>
> No, the feed point should be very close to 50 ohms that is what the
> transformer is doing. However, a 1:1 balun does have its place in further
> limiting the noise picked up by the loop and sent to your RX via common
> mode.
>
> Hope that helps.
>
>
> 73 Bob VE3UK
>
>
> --- In loopantennas@yahoogroups.com, <vk2tti@...> wrote:
>
> Tony and all, I am troubled by the repeated reference to the word balun,
> unless I have read incorrectly, nowhere does G0CWT refer to his transformer
> feed as a balun! And rightly so, whether or no it affects the balance of
> the loop I have no way of measuring. In practice it would not matter much,
> if I can't hear the difference does it matter? Regards to all, Max vk2tti.
>
> Sent from my iPad
>
> On 22/09/2013, at 13:20, Tony Magon <temagon@...> wrote:
>
>
> Hi Max and all
>
> I have made one up for 40 meters and tried it out briefly and it worked
> quite well. The balun tubes can be purchased from Jaycar.
>
> 73
>

> Tony VK2IC
>
>
> On Sun, Sep 22, 2013 at 11:55 AM, <vk2tti@...> wrote:
>
> **
>
>
> G'day Tony and all. Thank you for the heads up re G0CWT website have gone
> straight to it. Very impressive video with the neon tube and the high
> voltage and the clamp on current measure. My youngest daughter joined the
> human race and went to uni studdied engineering as a mature age student,
> now she am be one wiff a first and second class honours to her credit. She
> came homn one day said " You know Dad when you try to measure something you
> change it! ". It seems to me that G0CWT has demonstrated that adding an
> unbalanced pickup loop to a tuned loop alters the theoretical current and
> voltage distribution expected. I would like to see the same demonstration
> done without the pickup loop. The problem then becomes how to excite the
> loop in free space! Still an interesting website. Max VK2TTI.
>
>
> ----- Original Message -----
> From:
> loopantennas@yahoogroups.com
>
> To:
> <loopantennas@yahoogroups.com>
> Cc:
>
> Sent:
> Sun, 22 Sep 2013 09:48:19 +1000
> Subject:
> Re: [loopantennas] Question About Tuned Magnetic Loop
>
>
>
>
> Hi Max
>
> Have a look at G0CWT website.
>
> 73
>
> Tony VK2IC
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> On Sun, Sep 22, 2013 at 9:44 AM, Maxwell Mclellan <vk2tti@...> wrote:
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> winding will be 50 x 100= 5000 ohms. A parallel tuned loop exhibits a high
> impedance. If you assume a 100ohm secondary we get a transformation of a
> 100 x100= 10,000 ohms (I hope my Maths is right. If we consider a 1 turn
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> but can be brushed clean with a brass wire brush. I believe (religion)
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> VK2TTI.
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>
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10174. Re: [loopantennas] RE: Question About Tuned Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-23 07:45:27 UTC
From: Maxwell Mclellan
Topic: 10159 Message: 10174

Bob VE3UK, It's late afternoon here, in Canada you'll be asleep, makes communication a little difficult. In your last? Email "No, the feed point...." you reacted negatively to a statement, what was that statement mon ami? In anticipation Max vk2tti.

Sent from my iPad

On 23/09/2013, at 4:11, <leschyna@...> wrote:

> No, the feed point should be very close to 50 ohms that is what the transformer is doing. However, a 1:1 balun does have its place in further limiting the noise picked up by the loop and sent to your RX via common mode.
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> Hope that helps.
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> 73 Bob VE3UK
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>
>

10175. RE: Wellbrook Loop ALA1530

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-24 20:09:04 UTC
From: <fm5gb@...>
Topic: 10113 Message: 10175

Hi Todd

I purchased the ALA100LN from Wellbrook which is a low noise preamp ranging from 50 kHz thru 30 MHz. It ships with the power supply and must be fitted with a loop of ur choice (can be a circle, a square or a delta).
Don't make it bigger than a 21 m circumference delta loop or u experience too much signal and possible unwanted products may appear.
I utilize it from VLF thru shortwave, some time as a seperate receiving antenna with the second receiver of my Flex 5000. It has not been damaged yet by the hi power transmitting antennas which are very close to it. Compared to my ALA1530 it bring 10 to 20 dB stronger signals to the receiver but with NO improvement of the signal to noise ratio.
Any way il is interesting to experiment with different loop shapes and sizes.

Best 73's de Phil FM5GB

---In loopantennas@yahoogroups.com, <toddroberts2001@...> wrote:

Can one purchase just the ALA1530LF headamp from Wellbrook and build their

own loop for it? I don't see just the headamp listed on their webpages so I wonder if

someone can buy one special order or do they sell them only as replacements

for someone who already has one of their loops? I would need both the headamp and

the matching power inserter. Thanks for any info.

73 Todd WD4NGG

10176. Corrected copy A Practical Approach To Building and Evaluating a Broadband Active Loop Antenna, looking at the Mobius, Conventional Shielded and Wire Loops".

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-25 18:41:13 UTC
From: <everettsharp@...>
Topic: 10176 Message: 10176

Guys,
I just deleted "A Practical Approach To Building and Evaluating a Broadband Active Loop Antenna, looking at the Mobius, Conventional Shielded and Wire Loops". It is being replace with a corrected copy. I have also added a part 2 to the original article. In "Part 2" I looked at a home made coax mobius loop and one built out of PEX-AL-PEX water pipe.

73 Everett N8CNP

10177. CapCo AMA-4 Top band loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-09-29 13:00:50 UTC
From: <paul@...>
Topic: 10177 Message: 10177

Hi all,
I have a rare CapCo AMA-4 top band / 80m loop and find even with the control box set to fine tune and set to slowest thats its still too fast. Has anyone got one of these loops that they have ether modified the gear box or fitted a new motor ?

Paul G0HWC
Photos of my loop Here:
http://www.g0hwc.com/antennas.html

10178. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-01 12:38:14 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10178

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
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> - Usually 20" to 24" in size
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>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10179. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-01 12:38:15 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10179

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10180. RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-01 16:00:40 UTC
From: <crusty@...>
Topic: 10111 Message: 10180

Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much?

---In loopantennas@yahoogroups.com, <syomin@...> wrote:

Hi, everybody!
 I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (http://www.diptrace.com/?en=1).
 Best regards, Pavel

10181. FW: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 10:06:35 UTC
From: dx11
Topic: 10181 Message: 10181

With a friend I am in the process of building a magnetic unturned active loop of about 1 meter diameter for each of us for general and ham band listening.

I have often seen remarks that these loops perform best at a few meters above ground level.

Has anyone got any experience with the use of this type of antenna on a rooftop.

We have the option of placing this antenna on the flat concrete roof of a flat building of about 30 meters height, any advice?

How would this compare with the positioning of this same antenna on the balcony railing somewhat lower?

I hope someone can fill in the voids in my own experience.

Cor Beijersbergen

10182. Re: [loopantennas] FW: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 13:07:49 UTC
From: jose kucher
Topic: 10181 Message: 10182

Is an issue in urban areas ¿if put elevated 8 /10 meters above ground the loop pickups more human line noise?

maybe better s/n over the garden grass???

joe, argentina

From: dx11
Sent: Friday, October 04, 2013 7:06 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] FW: Loop on roof or in garden?

With a friend I am in the process of building a magnetic unturned active loop of about 1 meter diameter for each of us for general and ham band listening.

I have often seen remarks that these loops perform best at a few meters above ground level.

Has anyone got any experience with the use of this type of antenna on a rooftop.

We have the option of placing this antenna on the flat concrete roof of a flat building of about 30 meters height, any advice?

How would this compare with the positioning of this same antenna on the balcony railing somewhat lower?

I hope someone can fill in the voids in my own experience.

Cor Beijersbergen

_____ Information from ESET NOD32 Antivirus, version of virus signature database 8874 (20131004) _____

The message was checked by ESET NOD32 Antivirus.

http://www.eset.com

_____ Information from ESET NOD32 Antivirus, version of virus signature database 8875 (20131004) _____

The message was checked by ESET NOD32 Antivirus.

http://www.eset.com

10183. RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 07:46:10 UTC
From: <syomin@...>
Topic: 10111 Message: 10183

> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic.
Not principal, as for me.

> Does the inclusion of protection diodes effect the low-pass filter much?
Don't know. I just guided by this article:
http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm

---In loopantennas@yahoogroups.com, <crusty@...> wrote:

Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much?

---In loopantennas@yahoogroups.com, <syomin@...> wrote:

Hi, everybody!
 I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (http://www.diptrace.com/?en=1).
 Best regards, Pavel

10184. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 13:30:25 UTC
From: saguillar@...
Topic: 10111 Message: 10184

I not use diodes put a relay to connect the loop when in use Enviado desde mi BlackBerry de Movistar (http://www.movistar.com.ar) -----Original Message----- From: Sender: loopantennas@yahoogroups.com Date: 04 Oct 2013 00:46:10 To: Reply-To: loopantennas@yahoogroups.com Subject: [loopantennas] RE: Homebrew LZ1AQ amplifier > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Not principal, as for me. > Does the inclusion of protection diodes effect the low-pass filter much? Don't know. I just guided by this article: http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm ---In loopantennas@yahoogroups.com, wrote: Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? ---In loopantennas@yahoogroups.com, wrote: Hi, everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (http://www.diptrace.com/?en=1).

Best regards,
Pavel

10185. Re: [loopantennas] FW: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 16:34:12 UTC
From: Myamiphil
Topic: 10181 Message: 10185
Attachments: 1 described; binary payloads are missing from this source WARC

Consider that ultralight DX listening is mostly done on a tabletop... with enhanced external iron core loop antennas.. I recently received an article about a radial wire antenna literally laid on the ground! Running a long wire for MW listening is a challenge for most. This article blows away the idea that an antenna needs to be elevated. Haven't tried it myself, but I will be soon. a great idea for portable operation. Mind you I am only considering receive mode here. Transmitting antennas is another story.

I would think a loop would operate very well at ground level. I do recall seeing a rather large loop for a radio station in Washington State. The thing had to be 30+ ft high....a rather thick monster sitting on a small mountain top. It was on the ground. on a cement slab. Its in the town of Odessa near the water tower.

I would keep it close to the ground. maybe 6 ft - 10 ft?

Best Regards
Phil
Lat: 40.8367633 Long: -74.1768412

_____
From: jose kucher <saguillar@...m>
To: loopantennas@yahoogroups.com
Sent: Friday, October 4, 2013 9:07 AM
Subject: Re: [loopantennas] FW: Loop on roof or in garden?

Is an issue in urban areas ¿if put elevated 8
/10 meters above ground the loop pickups more human line noise?

maybe better s/n over the garden
grass???

joe, argentina

From: dx11
Sent: Friday, October 04, 2013 7:06 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] FW: Loop on roof or in
garden?

With a friend I am in the process of building a magnetic
unturned active loop of about 1 meter diameter for each of us for general and
ham band listening.
I have often seen remarks that these loops perform best at a
 few meters above ground level.
Has anyone got any experience with the use of this type of
antenna on a rooftop.
We have the option of placing this antenna on the flat

concrete roof of a flat building of about 30 meters height, any advice?
How would this compare with the positioning of this same
antenna on the balcony railing somewhat lower?
I hope someone can fill in the voids in my own
experience.
Cor Beijersbergen

_____
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http://www.eset.com

_____ Information from ESET NOD32 Antivirus, version of virus signature database 8875
(20131004) _____

The message was checked by ESET NOD32 Antivirus.

http://www.eset.com

10186. RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 17:17:23 UTC
From: <crusty@...>
Topic: 10111 Message: 10186

Yes they both differ from LZ1AQ's notes. I wondered if these changes were made to modify the performance of the amplifier.
73.

---In loopantennas@yahoogroups.com, <saguillar@...> wrote:

I not use diodes put a relay to connect the loop when in use
Enviado desde mi BlackBerry de Movistar (http://www.movistar.com.ar)
From: <syomin@...>
Sender: loopantennas@yahoogroups.com
Date: 04 Oct 2013 00:46:10 -0700
To: <loopantennas@yahoogroups.com>
ReplyTo: loopantennas@yahoogroups.com
Subject: [loopantennas] RE: Homebrew LZ1AQ amplifier

> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic.
Not principal, as for me.

> Does the inclusion of protection diodes effect the low-pass filter much?

Don't know. I just guided by this article:
http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm

---In loopantennas@yahoogroups.com, <crusty@...> wrote:

Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much?

---In loopantennas@yahoogroups.com, <syomin@...> wrote:

Hi, everybody!
 I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (http://www.diptrace.com/?en=1).
 Best regards, Pavel

10187. Re: [loopantennas] FW: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 13:37:01 UTC
From: Göran Norstedt
Topic: 10181 Message: 10187

I have tried both, and I have also asked around for
advice and best practice.
The advice I have been given is that the best location
depends on mainly two things:
1. Frequency of choice
2. Type of local desturbances experienced

Me, being a LW, NDB and MW- buff with lots of local urban electrical disturbances from PSU, TV-sets, etc, I settled for the ground mounted. This gives me the least amount of disturbances going into the loop, because the soil screens a big part of the circumference of the loop, the bottom part. :)
The higher the ferquency you want to cover, the more the loop
benefits from a high altitude. Bear also in mind that loops are
more directional at lower frequencies.
You guys, building two loops, have the golden opportunity. Place
yours in the garden and your buddy's on the roof and try out
best practice for your own needs.
Good luck, and dont forget to build a yourseves good, low noise amps. Loops arent whichcraft by any kind, small antennas generate lesser signals than big, by comparison.

73 de Göran

Göran Norstedt
SM7IYM at JO65mq
Lomma, SWE

+4640412213
+46709374909

> 4 okt 2013 kl. 12:06 skrev "dx11" <dx11@...>:
>
>
>
> With a friend I am in the process of building a magnetic unturned active loop of about 1 meter diameter for each of us for general and ham band listening.
>
> I have often seen remarks that these loops perform best at a few meters above ground level.
>
> Has anyone got any experience with the use of this type of antenna on a rooftop.
>
> We have the option of placing this antenna on the flat concrete roof of a flat building of about 30 meters height, any advice?
>
> How would this compare with the positioning of this same antenna on the balcony railing somewhat lower?

>
>
>
> I hope someone can fill in the voids in my own experience.
>
>
>
> Cor Beijersbergen
>
>

10188. RE: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 13:43:13 UTC
From: Thomas F Giella W4HM
Topic: 10188 Message: 10188

It's not necessary to elevate a magnetic receive loop as the pattern is the same whether at ground level or 30 feet above ground. If you do elevate the receive loop the vertical or near vertical run of coax feedline will pick up noise in the local field which will defeat the S/N improvement that one normally looks for in this type of antenna.

This problem can be pretty much solved by adding coaxial choke BALUNS at the feed point of the receive loop and at the radio shack service entrance. But it's not a fool proof solution.

Check out my receive loop web page at http://www.wcflunatall.com/w4hm14.htm
.

73 & GUD DX,
Thomas F. Giella W4HM
Lakeland, FL, USA
w4hm@...

W4HM Amateur Radio & SWL Autobiography: http://www.w4hm.org

10189. Re: [loopantennas] FW: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-04 17:24:51 UTC
From: Göran Norstedt
Topic: 10181 Message: 10189

I have tried both, and I have also asked around for
advice and best practice.
The advice I have been given is that the best location
depends on mainly two things:
1. Frequency of choice
2. Type of local desturbances experienced

Me, being a LW, NDB and MW- buff with lots of local urban electrical disturbances from PSU, TV-sets, etc, I settled for the ground mounted. This gives me the least amount of disturbances going into the loop, because the soil screens a big part of the circumference of the loop, the bottom part. :)
The higher the ferquency you want to cover, the more the loop
benefits from a high altitude. Bear also in mind that loops are
more directional at lower frequencies.
You guys, building two loops, have the golden opportunity. Place
yours in the garden and your buddy's on the roof and try out
best practice for your own needs.
Good luck, and dont forget to build a yourseves good, low noise amps. Loops arent whichcraft by any kind, small antennas generate lesser signals than big, by comparison.

73 de Göran

Göran Norstedt
SM7IYM at JO65mq
Lomma, SWE

+4640412213
+46709374909

> 4 okt 2013 kl. 12:06 skrev "dx11" <dx11@...>:
>
>
>
> With a friend I am in the process of building a magnetic unturned active loop of about 1 meter diameter for each of us for general and ham band listening.
>
> I have often seen remarks that these loops perform best at a few meters above ground level.
>
> Has anyone got any experience with the use of this type of antenna on a rooftop.
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> We have the option of placing this antenna on the flat concrete roof of a flat building of about 30 meters height, any advice?
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> How would this compare with the positioning of this same antenna on the balcony railing somewhat lower?

>
>
>
> I hope someone can fill in the voids in my own experience.
>
>
>
> Cor Beijersbergen
>
>

10190. RE: RE: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-05 13:34:58 UTC
From: <izozin@...>
Topic: 10188 Message: 10190

DL2KQ says you MUST elevate the loop, especially if it is relatively large:
http://dl2kq.de/ant/3-73.htm
Please try to use Google Translator or any other. This is extremely interesting article, written by DL2KQ.
For those who doesn't know: this guy published 6-part Antenna theory book, as well as re-build first the known MMANA modeling SW, then made a new one, GAL-ANA, which is very popular today among antenna manufacturers.
I think that with only limitation -written in Russian- this web site is most comprehensive antenna-related web site today.
73,
Ilya, 4Z1UF

---In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

It's not necessary to elevate a magnetic receive loop as the pattern is the same whether at ground level or 30 feet above ground. If you do elevate the receive loop the vertical or near vertical run of coax feedline will pick up noise in the local field which will defeat the S/N improvement that one normally looks for in this type of antenna.

This problem can be pretty much solved by adding coaxial choke BALUNS at the feed point of the receive loop and at the radio shack service entrance. But it's not a fool proof solution.

Check out my receive loop web page at http://www.wcflunatall.com/w4hm14.htm
.

73 & GUD DX,
Thomas F. Giella W4HM
Lakeland, FL, USA
w4hm@...

W4HM Amateur Radio & SWL Autobiography: http://www.w4hm.org

10191. RE: RE: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-05 13:54:22 UTC
From: <izozin@...>
Topic: 10188 Message: 10191

Sorry, some addition: one needs to elevate the RX loop in case we are talking about the roof of condos/apartment building. There is definitely no need doing so if you are on the ground.

73,
Ilya, 4Z1UF

---In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

It's not necessary to elevate a magnetic receive loop as the pattern is the same whether at ground level or 30 feet above ground. If you do elevate the receive loop the vertical or near vertical run of coax feedline will pick up noise in the local field which will defeat the S/N improvement that one normally looks for in this type of antenna.

This problem can be pretty much solved by adding coaxial choke BALUNS at the feed point of the receive loop and at the radio shack service entrance. But it's not a fool proof solution.

Check out my receive loop web page at http://www.wcflunatall.com/w4hm14.htm
.

73 & GUD DX,
Thomas F. Giella W4HM
Lakeland, FL, USA
w4hm@...

W4HM Amateur Radio & SWL Autobiography: http://www.w4hm.org

10192. Re: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-05 14:42:26 UTC
From: John
Topic: 10188 Message: 10192

We moved in July to a 'garden home' some 2.6 miles from my previous home in a community with a strict Home Owner's Association, including no external antennas save a satellite TV dish on the back of the house, and underground utilities. My previously low back deck mounted Pixel PRO-1A loop, fed with RG-6QS, went from outside mounted loop center at 8 ft above the ground and oriented to lessen the powerline/house wiring noise pickup to 22 ft above the slab inside my steeply inclined attic. Noise pickup is far less than the best days at my old home and local MW stations, WWV, R. Australia, etc, are as strong as before on both my Palstar R30A and Icom R75 - just more noise free. I did orient the loop to minimize dimmer noise pickup from the kitchen pot lights, but, as I am the cook, I just leave them off when I want to critically listen.

I moved the loop & amp still connected to a 5 ft mast section - and quickly mounted the mast in a tripod mount resting on the attic's plywood floor. All the way up, I still would have 3-4 ft to the roof's ridge. I ran some RG-6QS to the area over my office where I found RG-6 leads from the two F female panel jacks in my room. It was super easy to feed the loop from behind my desk - thank you thoughtful house designer!

The loop was tried at my old house after I lost my tall trees, longtime long wire supports, and could no longer null the powerline noise. It's great for nulling one source of QRM - like the high tension lines which ran in front of my old house - and resurrected my SWLing hobby. Putting it up from 8 ft to 22+ ft didn't seem to affect the signal strength - the underground services seem much quieter. My advice is to separate the loop from local noise sources and then minimize the pickup of same by rotating the loop. The height over ground shouldn't matter re signal pickup.

Good listening!

John

10193. RE: FW: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-05 15:06:49 UTC
From: <winston376@...>
Topic: 10181 Message: 10193

Cor,

For receive only, I performed some experiments a few years ago with a 2 meter diameter untuned loop consisting of 1/2 inch water copper pipe and minicircuits balun(s) interfacing to the coaxial cable. Cable(75 ohm RG-6 Quad shielding) had large ferrite beads or alternatively, multiturns on large diameter toroids at both ends. Outside of the house at ground level, rooftop, and on a 12 meter tower. Main concern was the EMI emissions from TV's, PC's flourescent lights etc. in a suburban high density housing tract.

For EMI, it was worse at ground level (2-5 meters from the house). Less EMI on the rooftop (5 meters above ground) and least EMI on the tower. That was LF through 30 MHz.

As far as signal strength of LF beacons and local MW broadcasters, the signal strength was best at ground level measured at about 2-6 dB higher than at the tower elevation.....however, the EMI was also much higher. For SW above about 4-8 MHz, signal strength of ham and broadcasters was higher on the rooftop as well as even higher on the tower.

Hope this helps

Alex

---In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

With a friend I am in the process of building a magnetic unturned active loop of about 1 meter diameter for each of us for general and ham band listening.
I have often seen remarks that these loops perform best at a few meters above ground level.
Has anyone got any experience with the use of this type of antenna on a rooftop.
We have the option of placing this antenna on the flat concrete roof of a flat building of about 30 meters height, any advice?
How would this compare with the positioning of this same antenna on the balcony railing somewhat lower?

I hope someone can fill in the voids in my own experience.

Cor Beijersbergen

10194. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-06 16:11:57 UTC
From: everettsharp@...
Topic: 10111 Message: 10194
Attachments: 1 described; binary payloads are missing from this source WARC

Guys, I found that this modified M0AYF amp works much better than the IZ1AG amp. Everett N8CNP In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Not principal, as for me. > Does the inclusion of protection diodes effect the low-pass filter much? Don't know. I just guided by this article: http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_prote ction.htm ---In loopantennas@yahoogroups.com, wrote: Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? ---In loopantennas@yahoogroups.com, wrote: Hi , everybody!

I have designed PCB to build my own L Z1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (http://www.diptrace.com/?en=1).

Best regards,
Pavel

10195. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-06 18:47:11 UTC
From: Paul V Birke PEng
Topic: 10111 Message: 10195
Attachments: 1 described; binary payloads are missing from this source WARC

it might work even better if you replace R8 with a ground gate JFET like J310 or J309 otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback best Paul _____ From: "everettsharp@..." To: loopantennas@yahoogroups.com Sent: Sunday, October 6, 2013 12:11:57 PM Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Guys, I found that this modified M0AYF amp works much better than the IZ1AG amp. Everett N8CNP In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: >> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. >Not principal, as for me. > > >> Does the inclusion of protection diodes effect the low-pass filter much? > >Don't know. I just guided by this article: >http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm > > > >---In loopantennas@yahoogroups.com, wrote: > > >Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? > > >---In loopantennas@yahoogroups.com, wrote: > > >Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (

10196. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 00:09:26 UTC
From: Everett Sharp
Topic: 10111 Message: 10196

Sent from my iPad > On Oct 6, 2013, at 1:47 PM, Paul V Birke PEng wrote: > > it might work even better if you replace R8 with a ground gate JFET like J310 or J309 > > otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback > > best Paul > > > From: "everettsharp@..." > To: loopantennas@yahoogroups.com > Sent: Sunday, October 6, 2013 12:11:57 PM > Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier > > Guys, > > I found that this modified M0AYF amp works much better than the IZ1AG amp. > > > > Everett N8CNP > > In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: > > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. > Not principal, as for me. > > > Does the inclusion of protection diodes effect the low-pass filter much? > Don't know. I just guided by this article: > http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm > > > ---In loopantennas@yahoogroups.com, wrote: > > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? > > > ---In loopantennas@yahoogroups.com, wrote: > > Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (> >

10197. Re: [loopantennas] RE: RE: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 00:19:23 UTC
From: Myamiphil
Topic: 10188 Message: 10197
Attachments: 1 described; binary payloads are missing from this source WARC

Translated and reformatted....google translator

Best Regards
Phil
Lat: 40.8367633 Long: -74.1768412

From: "izozin@..." <izozin@...>
To: loopantennas@yahoogroups.com
Sent: Saturday, October 5, 2013 9:34 AM
Subject: [loopantennas] RE: RE: Loop on roof or in garden?

DL2KQ says you MUST elevate the loop, especially if it is relatively large: http://dl2kq.de/ant/3-73.htm
Please try to use Google Translator or any other. This is extremely interesting article, written by DL2KQ.
For those who doesn't know: this guy published 6-part Antenna theory book, as well as re-build first the known MMANA modeling SW, then made a new one, GAL-ANA, which is very popular today among antenna manufacturers.
I think that with only limitation -written in Russian- this web site is most comprehensive antenna-related web site today.
73,
Ilya, 4Z1UF

---In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

It's not necessary to elevate a magnetic receive loop as the pattern is the same whether at ground level or 30 feet above ground. If you do elevate the receive loop the vertical or near vertical run of coax feedline will pick up noise in the local field which will defeat the S/N improvement that one normally looks for in this type of antenna.

This problem can be pretty much solved by adding coaxial choke BALUNS at the feed point of the receive loop and at the radio shack service entrance. But it's not a fool proof solution.

Check out my receive loop web page at http://www.wcflunatall.com/w4hm14.htm
.

73 & GUD DX,
Thomas F. Giella W4HM
Lakeland, FL, USA
w4hm@...

W4HM Amateur Radio & SWL Autobiography: http://www.w4hm.org

10198. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 02:21:11 UTC
From: Paul V Birke PEng
Topic: 10111 Message: 10198

connect drain to emmitter and try gate to source which is then grounded try J305 or J310 or J309 gives some constant current ranges also trick of introducing variable source to ground resistance say 0 to 100 ohms to identify operating current gate grounded p _____ From: Everett Sharp To: "loopantennas@yahoogroups.com" Cc: "loopantennas@yahoogroups.com" Sent: Sunday, October 6, 2013 8:09:26 PM Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Sent from my iPad On Oct 6, 2013, at 1:47 PM, Paul V Birke PEng wrote: it might work even better if you replace R8 with a ground gate JFET like J310 or J309 > >otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback > >best Paul > > > > > > >_____ > From: "everettsharp@..." >To: loopantennas@yahoogroups.com >Sent: Sunday, October 6, 2013 12:11:57 PM >Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier > > > >Guys, > >I found that this modified M0AYF amp works much better than the IZ1AG amp. > > > >Everett N8CNP > >In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: > >>> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. >>Not principal, as for me. >> >> >>> Does the inclusion of protection diodes effect the low-pass filter much? >> >>Don't know. I just guided by this article: >>http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm >> >> >> >>---In loopantennas@yahoogroups.com, wrote: >> >> >>Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? >> >> >>---In loopantennas@yahoogroups.com, wrote: >> >> >>Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (> > >

10199. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 02:35:16 UTC
From: Everett Sharp
Topic: 10111 Message: 10199

Would you still use a resistor between the gate and ground? If so would it still be 50 ohms? Sent from my iPad > On Oct 6, 2013, at 9:21 PM, Paul V Birke PEng wrote: > > connect drain to emmitter and try gate to source which is then grounded > > try J305 or J310 or J309 gives some constant current ranges > > also trick of introducing variable source to ground resistance say 0 to 100 ohms to identify operating current > > gate grounded > > p > > > From: Everett Sharp > To: "loopantennas@yahoogroups.com" > Cc: "loopantennas@yahoogroups.com" > Sent: Sunday, October 6, 2013 8:09:26 PM > Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier > > > > > Sent from my iPad > >> On Oct 6, 2013, at 1:47 PM, Paul V Birke PEng wrote: >> >> it might work even better if you replace R8 with a ground gate JFET like J310 or J309 >> >> otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback >> >> best Paul >> >> >> From: "everettsharp@..." >> To: loopantennas@yahoogroups.com >> Sent: Sunday, October 6, 2013 12:11:57 PM >> Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier >> >> Guys, >> >> I found that this modified M0AYF amp works much better than the IZ1AG amp. >> >> >> >> Everett N8CNP >> >> In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: >> >> > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. >> Not principal, as for me. >> >> > Does the inclusion of protection diodes effect the low-pass filter much? >> Don't know. I just guided by this article: >> http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm >> >> >> ---In loopantennas@yahoogroups.com, wrote: >> >> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? >> >> >> ---In loopantennas@yahoogroups.com, wrote: >> >> Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (>> >> > > > >

10200. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 02:43:05 UTC
From: Paul V Birke PEng
Topic: 10111 Message: 10200

not necessarily find what current you think is best in present setup and try to get the jfet to give the same Idss for 305 about 4 to 8 ma for the 309 310 this can get up to 15 to 25 you want to match the JFET current to your near optimal so the source to ground resistance can vary try 50 to start and see if you get enough current with a 310 again effort is worth to get this best here is a Wilson constant current source needing 4 matched NPN transistors look up full Wilson constant current source, you can get a bit more control with that one p _____ From: Everett Sharp To: "loopantennas@yahoogroups.com" Sent: Sunday, October 6, 2013 10:35:16 PM Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Would you still use a resistor between the gate and ground? If so would it still be 50 ohms? Sent from my iPad On Oct 6, 2013, at 9:21 PM, Paul V Birke PEng wrote: >connect drain to emmitter and try gate to source which is then grounded > >try J305 or J310 or J309 gives some constant current ranges > >also trick of introducing variable source to ground resistance say 0 to 100 ohms to identify operating current > >gate grounded > >p > > > > > > >_____ > From: Everett Sharp >To: "loopantennas@yahoogroups.com" >Cc: "loopantennas@yahoogroups.com" >Sent: Sunday, October 6, 2013 8:09:26 PM >Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier > > > > > > >Sent from my iPad > >On Oct 6, 2013, at 1:47 PM, Paul V Birke PEng wrote: > > >it might work even better if you replace R8 with a ground gate JFET like J310 or J309 >> >>otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback >> >>best Paul >> >> >> >> >> >> >>_____ >> From: "everettsharp@..." >>To: loopantennas@yahoogroups.com >>Sent: Sunday, October 6, 2013 12:11:57 PM >>Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier >> >> >> >>Guys, >> >>I found that this modified M0AYF amp works much better than the IZ1AG amp. >> >> >> >>Everett N8CNP >> >>In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@rambler.ru writes: >> >>>> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. >>>Not principal, as for me. >>> >>> >>>> Does the inclusion of protection diodes effect the low-pass filter much? >>> >>>Don't know. I just guided by this article: >>>http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm >>> >>> >>> >>>---In loopantennas@yahoogroups.com, wrote: >>> >>> >>>Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? >>> >>> >>>---In loopantennas@yahoogroups.com, wrote: >>> >>> >>>Hi , everybody!

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10201. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 02:45:58 UTC
From: Paul V Birke PEng
Topic: 10111 Message: 10201

http://en.wikipedia.org/wiki/Wilson_current_mirror Wilson current mirrop you can make this up with resonable matched gain 2n2222 Everett best wishes Paul _____ From: Everett Sharp To: "loopantennas@yahoogroups.com" Sent: Sunday, October 6, 2013 10:35:16 PM Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Would you still use a resistor between the gate and ground? If so would it still be 50 ohms? Sent from my iPad On Oct 6, 2013, at 9:21 PM, Paul V Birke PEng wrote: >connect drain to emmitter and try gate to source which is then grounded > >try J305 or J310 or J309 gives some constant current ranges > >also trick of introducing variable source to ground resistance say 0 to 100 ohms to identify operating current > >gate grounded > >p > > > > > > >_____ > From: Everett Sharp >To: "loopantennas@yahoogroups.com" >Cc: "loopantennas@yahoogroups.com" >Sent: Sunday, October 6, 2013 8:09:26 PM >Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier > > > > > > >Sent from my iPad > >On Oct 6, 2013, at 1:47 PM, Paul V Birke PEng wrote: > > >it might work even better if you replace R8 with a ground gate JFET like J310 or J309 >> >>otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback >> >>best Paul >> >> >> >> >> >> >>_____ >> From: "everettsharp@..." >>To: loopantennas@yahoogroups.com >>Sent: Sunday, October 6, 2013 12:11:57 PM >>Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier >> >> >> >>Guys, >> >>I found that this modified M0AYF amp works much better than the IZ1AG amp. >> >> >> >>Everett N8CNP >> >>In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: >> >>>> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. >>>Not principal, as for me. >>> >>> >>>> Does the inclusion of protection diodes effect the low-pass filter much? >>> >>>Don't know. I just guided by this article: >>>http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm >>> >>> >>> >>>---In loopantennas@yahoogroups.com, wrote: >>> >>> >>>Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? >>> >>> >>>---In loopantennas@yahoogroups.com, wrote: >>> >>> >>>Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (>> >> >> > >

10202. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 02:54:47 UTC
From: Everett Sharp
Topic: 10111 Message: 10202

My current circuit draws 55 ma @ 8.25 V Sent from my iPad > On Oct 6, 2013, at 9:43 PM, Paul V Birke PEng wrote: > > not necessarily > > find what current you think is best in present setup and try to get the jfet to give the same > > Idss for 305 about 4 to 8 ma for the 309 310 this can get up to 15 to 25 > > you want to match the JFET current to your near optimal > > so the source to ground resistance can vary > > try 50 to start and see if you get enough current with a 310 > > again effort is worth to get this > > best here is a Wilson constant current source needing 4 matched NPN transistors > > look up full Wilson constant current source, you can get a bit more control with that one > > p > > > From: Everett Sharp > To: "loopantennas@...m" > Sent: Sunday, October 6, 2013 10:35:16 PM > Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier > > > Would you still use a resistor between the gate and ground? If so would it still be 50 ohms? > > Sent from my iPad > >> On Oct 6, 2013, at 9:21 PM, Paul V Birke PEng wrote: >> >> >> connect drain to emmitter and try gate to source which is then grounded >> >> try J305 or J310 or J309 gives some constant current ranges >> >> also trick of introducing variable source to ground resistance say 0 to 100 ohms to identify operating current >> >> gate grounded >> >> p >> >> >> From: Everett Sharp >> To: "loopantennas@yahoogroups.com" >> Cc: "loopantennas@yahoogroups.com" >> Sent: Sunday, October 6, 2013 8:09:26 PM >> Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier >> >> >> >> >> Sent from my iPad >> >>> On Oct 6, 2013, at 1:47 PM, Paul V Birke PEng wrote: >>> >>> it might work even better if you replace R8 with a ground gate JFET like J310 or J309 >>> >>> otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback >>> >>> best Paul >>> >>> >>> From: "everettsharp@..." >>> To: loopantennas@yahoogroups.com >>> Sent: Sunday, October 6, 2013 12:11:57 PM >>> Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier >>> >>> Guys, >>> >>> I found that this modified M0AYF amp works much better than the IZ1AG amp. >>> >>> >>> >>> Everett N8CNP >>> >>> In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: >>> >>> > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. >>> Not principal, as for me. >>> >>> > Does the inclusion of protection diodes effect the low-pass filter much? >>> Don't know. I just guided by this article: >>> http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm >>> >>> >>> ---In loopantennas@yahoogroups.com, wrote: >>> >>> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? >>> >>> >>> ---In loopantennas@yahoogroups.com, wrote: >>> >>> Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (> > >

10203. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 04:09:37 UTC
From: Paul V Birke PEng
Topic: 10111 Message: 10203

you will need 2 J310s in parallel, maybe three worth a hard try Everett, I was stunned when I first tried these techniques about 5 years ago you will never put that emitter resistance in ANYMORE best Paul _____ From: Everett Sharp To: "loopantennas@yahoogroups.com" Cc: "loopantennas@yahoogroups.com" Sent: Sunday, October 6, 2013 10:54:47 PM Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier My current circuit draws 55 ma @ 8.25 V Sent from my iPad On Oct 6, 2013, at 9:43 PM, Paul V Birke PEng wrote: >not necessarily > >find what current you think is best in present setup and try to get the jfet to give the same > >Idss for 305 about 4 to 8 ma for the 309 310 this can get up to 15 to 25 > >you want to match the JFET current to your near optimal > >so the source to ground resistance can vary > >try 50 to start and see if you get enough current with a 310 > >again effort is worth to get this > >best here is a Wilson constant current source needing 4 matched NPN transistors > >look up full Wilson constant current source, you can get a bit more control with that one > >p > > > > > > > >_____ > From: Everett Sharp >To: "loopantennas@yahoogroups.com" >Sent: Sunday, October 6, 2013 10:35:16 PM >Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier > > > > >Would you still use a resistor between the gate and ground? If so would it still be 50 ohms? > >Sent from my iPad > >On Oct 6, 2013, at 9:21 PM, Paul V Birke PEng wrote: > > > >>connect drain to emmitter and try gate to source which is then grounded >> >>try J305 or J310 or J309 gives some constant current ranges >> >>also trick of introducing variable source to ground resistance say 0 to 100 ohms to identify operating current >> >>gate grounded >> >>p >> >> >> >> >> >> >>_____ >> From: Everett Sharp >>To: "loopantennas@yahoogroups.com" >>Cc: "loopantennas@yahoogroups.com" >>Sent: Sunday, October 6, 2013 8:09:26 PM >>Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier >> >> >> >> >> >> >> >>Sent from my iPad >> >>On Oct 6, 2013, at 1:47 PM, Paul V Birke PEng wrote: >> >> >>it might work even better if you replace R8 with a ground gate JFET like J310 or J309 >>> >>>otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback >>> >>>best Paul >>> >>> >>> >>> >>> >>> >>>_____ >>> From: "everettsharp@..." >>>To: loopantennas@yahoogroups.com >>>Sent: Sunday, October 6, 2013 12:11:57 PM >>>Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier >>> >>> >>> >>>Guys, >>> >>>I found that this modified M0AYF amp works much better than the IZ1AG amp. >>> >>> >>> >>>Everett N8CNP >>> >>>In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: >>> >>>>> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. >>>>Not principal, as for me. >>>> >>>> >>>>> Does the inclusion of protection diodes effect the low-pass filter much? >>>> >>>>Don't know. I just guided by this article: >>>>http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm >>>> >>>> >>>> >>>>---In loopantennas@yahoogroups.com, wrote: >>>> >>>> >>>>Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? >>>> >>>> >>>>---In loopantennas@yahoogroups.com, wrote: >>>> >>>> >>>>Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (>>> >>> >>>

>> >> > >

10204. RE: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 07:40:55 UTC
From: dx11
Topic: 10111 Message: 10204
Attachments: 1 described; binary payloads are missing from this source WARC

Hello Everett, Three years ago the M0AYF antenna was also discussed in this group, Chris Trask gave the following contribution to the discussion (2010, July 20): “One item I find missing from this design is an input BalBal transformer. Such a transformer would serve a number of uses, in particular providing a degree of immunity from common-mode interference such as lightning strikes. It would also provide a ground reference for the antenna proper, and in addition would allow the two transistors to have an identical base voltage. The limiting diodes would be placed across the primary side of the transformer. I would also disconnect the two emitters, have a separate biasing resistor from each emitter to ground, and then a suitable capacitor between the two emitters. Then the two capacitors from the collectors to the output transformer primary winding can be eliminated. The 1:1 UnUn output transformer could be replaced with a 1:1:1 BalUn, the centre tap of the primary connected to the supply line. This would increase the P1dB a bit plus raise the gain by an additional 6dB.” I built the original circuit, but I’m planning a further one along Chris’ recommendations. In your document about your experiments with Moebius loops you were not very positive about the M0AYF design. Later on after changing to a different amplifier you found a large improvement by connecting the loop coax braid to the amplifier ground. Did you try that with the M0AYF as well. What made you change your opinion on the M0AYF? Cor Beijersbergen From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of everettsharp@... Sent: zondag 6 oktober 2013 18:12 To: loopantennas@yahoogroups.com Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Guys, I found that this modified M0AYF amp works much better than the IZ1AG amp. Everett N8CNP In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Not principal, as for me. > Does the inclusion of protection diodes effect the low-pass filter much? Don't know. I just guided by this article: http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm ---In loopantennas@yahoogroups.com, wrote: Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? ---In loopantennas@yahoogroups.com, wrote: Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (

10205. RE: [loopantennas] FW: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 07:52:51 UTC
From: dx11
Topic: 10181 Message: 10205

Hello Göran,

Does it means that you advise to put the antenna high on the roof instead of somewhat lower on the balcony?

We will certainly compare the two situations after completion of our loops.

The amplifier we will use is not decided yet, I'm going through all the designs I have been able to find up to now. I do not have an education in electronics so I have to rely on what others mention about the subject.

Thanks for your reaction.

Cor Beijersbergen

10206. RE: [loopantennas] RE: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 07:59:25 UTC
From: dx11
Topic: 10188 Message: 10206

Hello Thomas,

We will certainly do some experimentations with common mode filters on the coax.

The Web page you mention about your receiving loop was already in my collection of articles on the subject, I will read it again.

Tnx,

Cor Beijersbergen

This problem can be pretty much solved by adding coaxial choke BALUNS at the

feed point of the receive loop and at the radio shack service entrance. But it's not a fool proof solution.

Check out my receive loop web page at http://www.wcflunatall.com/w4hm14.htm
.

10207. RE: [loopantennas] RE: RE: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 08:03:20 UTC
From: dx11
Topic: 10188 Message: 10207

Hello Ilya,

That is to get away from the noise field coming through the roof from underneath?

Cor Beijersbergen

>>>Sorry, some addition: one needs to elevate the RX loop in case we are talking about the roof of condos/apartment building. There is definitely no need doing so if you are on the ground.<<<

10208. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 13:13:44 UTC
From: everettsharp@...
Topic: 10111 Message: 10208
Attachments: 2 described; binary payloads are missing from this source WARC

Hi Cor, I have not seen any of Chris's writings below, however, Steve Ratzlaff, is the one that filled me in on changing the coils to connect directly to the Collectors on Q1 and Q2, I found out through experimenting that the amp worked better using 1 uF cap, rather then the .01 uF that it called for between the amp and the loop. Yesterday I made another change to the amp by removing the two 100 ohm resisters feeding the two coils and changed transistors. Now it works even better yet. It is now drawing 55 ma @ 8.25 V, whereas it was only drawing about 35 ma at the same voltage. I also changed the transistors to MPSH-10, thus replacing the 2N2222's. (Note: if you are considering using the MPSH-10 transistors, the pin outs are different than the 2N2222, rather than E, B, C, they are B, E, C, I found out the hard way) I tried it on the Mobius and it worked okay, but I was not able to get the 30 dB nulls, so I tried a 1:1, 1:2 and a 1:3 matching transformer and with the 1:3 I was able to get the 30 dB nulls. Also I noticed that it worked much better up band on 10 meters. Today I will compare it to the Clifton Z10046A amplifier. I am happy with the mobius loop, using the PEX AL PEX pipe, as I am able to get deeper nulls with it than a conventional shielded loop. Also it is way better than a 1 meter wire loop, as it has a lot less noise and you are able to null out most noise with the mobius. For the mobius to work well you need to get the capacitance down and you just can not do it with off the shelf coax. If you don't have, or can't get the PEX AL PEX pipe, then you could make up a coax loop like I did in the article. However, you need to have the loop capacitance down to 150 pF, or below, if you want the 30 dB nulls. It still works well above that, but you will not get the 30 dB nulls. I was only able to get 25 dB nulls with the home made coax loop, but other than that it worked as well as the PEX AL PEX mobius. Everett In a message dated 10/7/2013 2:41:01 A.M. Central Daylight Time, dx11@xs4all.nl writes: Hello Everett, Three years ago the M0AYF antenna was also discussed in this group, Chris Trask gave the following contribution to the discussion (2010, July 20): “One item I find missing from this design is an input BalBal transformer. Such a transformer would serve a number of uses, in particular providing a degree of immunity from common-mode interference such as lightning strikes. It would also provide a ground reference for the antenna proper, and in addition would allow the two transistors to have an identical base voltage. The limiting diodes would be placed across the primary side of the transformer. I would also disconnect the two emitters, have a separate biasing resistor from each emitter to ground, and then a suitable capacitor between the two emitters. Then the two capacitors from the collectors to the output transformer primary winding can be eliminated. The 1:1 UnUn output transformer could be replaced with a 1:1:1 BalUn, the centre tap of the primary connected to the supply line. This would increase the P1dB a bit plus raise the gain by an additional 6dB.” I built the original circuit, but I’m planning a further one along Chris’ recommendations. In your document about your experiments with Moebius loops you were not very positive about the M0AYF design. Later on after changing to a different amplifier you found a large improvement by connecting the loop coax braid to the amplifier ground. Did you try that with the M0AYF as well. What made you change your opinion on the M0AYF? Cor Beijersbergen From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of everettsharp@... Sent: zondag 6 oktober 2013 18:12 To: loopantennas@yahoogroups.com Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Guys, I found that this modified M0AYF amp works much better than the IZ1AG amp. Everett N8CNP In a message dated 10/4/2013

8:17:53 A.M. Central Daylight Time, _syomin@..._ (mailto:syomin@...) writes: > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Not principal, as for me. > Does the inclusion of protection diodes effect the low-pass filter much? Don't know. I just guided by this article: http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_prote ction.htm ---In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com) , <_crusty@..._ (mailto:crusty@...) > wrote: Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? ---In _loopantennas@yahoogroups.com_ (mailto:loopantennas@yahoogroups.com) , <_syomin@..._ (mailto:syomin@...) > wrote: Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (

10209. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 15:57:02 UTC
From: Jim
Topic: 10111 Message: 10209
Attachments: 1 described; binary payloads are missing from this source WARC

Not sure if Chris is on this group. If so, Chris, did you physically build a unit and perform tests or was this done using simulation or based on experince? Tnx Jim ----- Original Message ----- From: dx11 To: loopantennas@yahoogroups.com Sent: Monday, October 07, 2013 12:40 AM Subject: RE: [loopantennas] RE: Homebrew LZ1AQ amplifier Hello Everett, Three years ago the M0AYF antenna was also discussed in this group, Chris Trask gave the following contribution to the discussion (2010, July 20): “One item I find missing from this design is an input BalBal transformer. Such a transformer would serve a number of uses, in particular providing a degree of immunity from common-mode interference such as lightning strikes. It would also provide a ground reference for the antenna proper, and in addition would allow the two transistors to have an identical base voltage. The limiting diodes would be placed across the primary side of the transformer. I would also disconnect the two emitters, have a separate biasing resistor from each emitter to ground, and then a suitable capacitor between the two emitters. Then the two capacitors from the collectors to the output transformer primary winding can be eliminated. The 1:1 UnUn output transformer could be replaced with a 1:1:1 BalUn, the centre tap of the primary connected to the supply line. This would increase the P1dB a bit plus raise the gain by an additional 6dB.” I built the original circuit, but I’m planning a further one along Chris’ recommendations. In your document about your experiments with Moebius loops you were not very positive about the M0AYF design. Later on after changing to a different amplifier you found a large improvement by connecting the loop coax braid to the amplifier ground. Did you try that with the M0AYF as well. What made you change your opinion on the M0AYF? Cor Beijersbergen From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of everettsharp@... Sent: zondag 6 oktober 2013 18:12 To: loopantennas@yahoogroups.com Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Guys, I found that this modified M0AYF amp works much better than the IZ1AG amp. Everett N8CNP In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Not principal, as for me. > Does the inclusion of protection diodes effect the low-pass filter much? Don't know. I just guided by this article: http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm ---In loopantennas@yahoogroups.com, wrote: Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? ---In loopantennas@yahoogroups.com, wrote: Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (

10210. RE: RE: [loopantennas] RE: RE: Loop on roof or in garden?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 18:21:00 UTC
From: <izozin@...>
Topic: 10188 Message: 10210

Hello Cor,
yes, correct.
Thanks to Phil's correction you can see the full article in pdf. It stlll smells by goolge but quite readable. I will be glad to re-translate any portion if needed.
73,
Ilya, 4Z1UF

---In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

Hello Ilya,

That is to get away from the noise field coming through the roof from underneath?

Cor Beijersbergen

>>>Sorry, some addition: one needs to elevate the RX loop in case we are talking about the roof of condos/apartment building. There is definitely no need doing so if you are on the ground.<<<

10211. RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-07 18:44:02 UTC
From: <crusty@...>
Topic: 10111 Message: 10211

I built and modified the M0AYF amp for better Imd performance, and used it for some time. I've also built 2 of Chris's, 2 Nortons, the LZ1AQ and some (mediocre) attempts of my own. The stock LZ1AQ design built ugly style, with a single fat 80cm diameter copper loop has for me, been the most consistent performer for general HF listening. I think much depends on requirements and operating conditions. My main problem is strong local noise, something the M0AFY didn't handle well even when modified, or with a shielded loop.

I hope this gets to the list, for me using the web interface Yahoo groups are broken, almost impossible to follow post threads.
73.

---In loopantennas@yahoogroups.com, <everettsharp@...> wrote:

Guys,

I found that this modified M0AYF amp works much better than the IZ1AG amp.

Everett N8CNP

In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes:

> Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic.

Not principal, as for me.

> Does the inclusion of protection diodes effect the low-pass filter much?

Don't know. I just guided by this article:

http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm

---In loopantennas@yahoogroups.com, <crusty@...> wrote:

Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much?

---In loopantennas@yahoogroups.com, <syomin@...> wrote:

Hi , everybody!
 I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (<a rel="nofollow" href="http://www.diptrace.com/?en=1" style="line-height:1.22;">

10212. Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-08 01:20:13 UTC
From: Chris Trask
Topic: 10111 Message: 10212

>
>Not sure if Chris is on this group.
>

Yes, I'm here. I've been watching this thread waiting for an appropriate opportunity to make a comment or two.

>
>If so, Chris, did you physically build a unit and perform tests or was this done using simulation or
>based on experince?
>

Based on both, actually. I use it as standard design practice to avoid common-mode distortion at every stage whenever practical.

Chris

10213. RE: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-08 17:29:39 UTC
From: <watling_irene@...>
Topic: 10111 Message: 10213

---In loopantennas@yahoogroups.com, wrote: it might work even better if you replace R8 with a ground gate JFET like J310 or J309 otherwise looks pretty good, I note R4 and R5 has double duty as part of base bias and negative feedback best Paul From: "everettsharp@..." To: loopantennas@yahoogroups.com Sent: Sunday, October 6, 2013 12:11:57 PM Subject: Re: [loopantennas] RE: Homebrew LZ1AQ amplifier Guys, I found that this modified M0AYF amp works much better than the IZ1AG amp. Everett N8CNP In a message dated 10/4/2013 8:17:53 A.M. Central Daylight Time, syomin@... writes: > Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Not principal, as for me. > Does the inclusion of protection diodes effect the low-pass filter much? Don't know. I just guided by this article:
http://lz1aq.signacor.com/docs/Wide_Mag_loop_prot_v1/wideband_mag_loop_protection.htm
---In loopantennas@yahoogroups.com, wrote: Thank you. I noticed the power regulation filtering/decoupling differs from the original schematic. Does the inclusion of protection diodes effect the low-pass filter much? ---In loopantennas@yahoogroups.com, wrote: Hi , everybody!

I have designed PCB to build my own LZ1AQ amplifier at home. I want to share CAD project with comunity - to open it you need to download and install DipTrace program (

10214. Variable capacitor 30/700 HIDROIL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-11 08:17:49 UTC
From: Steinar Aanesland
Topic: 10111 Message: 10214

Hi all,

This is my first writing to the group, but I have been lurking around for awhile.
Does any of you guys know this product?

http://inac-radio.com/en/Condensador-variable-de-30700-Hidroil

LA5VNA Steinar

10215. Variable capacitor 30/700 HIDROIL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-11 11:54:13 UTC
From: Steinar Aanesland
Topic: 10111 Message: 10215

Hi all,

This is my first writing to the group, but I have been lurking around for awhile.
Does any of you guys know this product?
http://inac-radio.com/en/Condensador-variable-de-30700-Hidroil

LA5VNA Steinar

10216. Re: [loopantennas] Variable capacitor 30/700 HIDROIL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-12 10:21:30 UTC
From: Steinar Aanesland
Topic: 10111 Message: 10216

OK, probably not :)

LA5VNA S

On 11.10.2013 13:54, Steinar Aanesland wrote:
> Hi all,
>
> This is my first writing to the group, but I have been lurking around
> for awhile.
> Does any of you guys know this product?
> http://inac-radio.com/en/Condensador-variable-de-30700-Hidroil
>
> LA5VNA Steinar
>
>
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>
>
>

10217. Re: [loopantennas] Variable capacitor 30/700 HIDROIL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-13 17:58:07 UTC
From: toddroberts2001@...
Topic: 10111 Message: 10217

Hi Steinar,
When I tried to read about the Hidroil capacitor I could never download the full page. For some reason my browser would lock up when trying to download the full page. Sorry to say I cannot read the language either.

Could you describe to us what the Hidroil capacitor is? It looks like someone put together an interesting high-power capacitor for a transmitting loop antenna with some kind of built-in motorized tuning and remote control? It looks like nice wide copper tabs to make connections to the loop.

Is the capacitor immersed in some kind of oil? What does the 30/700 number stand for? Thanks for any additional info.

73 - Todd WD4NGG

In a message dated 10/13/2013 11:14:49 A.M. Eastern Daylight Time, saanes@... writes:

OK, probably not :)

LA5VNA S

On 11.10.2013 13:54, Steinar Aanesland wrote:
> Hi all,
>
> This is my first writing to the group, but I have been lurking around
> for awhile.
> Does any of you guys know this product?
> http://inac-radio.com/en/Condensador-variable-de-30700-Hidroil
>
> LA5VNA Steinar

10218. RE: Re: [loopantennas] Variable capacitor 30/700 HIDROIL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-13 19:05:16 UTC
From: <gnuarm.2006@...>
Topic: 10111 Message: 10218

I did a little searching and found this page. Looks like you were spot on!

http://r.twenga.es/g3.php?pg=VDs1OTkzNjU3Nzk4MTg2MjI2NTk2OzU4MDI1MTc7aHR0cDovL2luYWMtcmFkaW8uY29tL0NvbXBvbmVudGVzL0NvbmRlbnNhZG9yZXMtdmFyaWFibGVzLWRlLWFpcmUvQ29uZGVuc2Fkb3ItdmFyaWFibGUtZGUtMjAzMzBwRi1IaWRyb2lsOzZjYmY1Mzk0ZmZmMzhhNWE0N2E1Yjk4ZDZiMDZhYzk2&dac=4 http://r.twenga.es/g3.php?pg=VDs1OTkzNjU3Nzk4MTg2MjI2NTk2OzU4MDI1MTc7aHR0cDovL2luYWMtcmFkaW8uY29tL0NvbXBvbmVudGVzL0NvbmRlbnNhZG9yZXMtdmFyaWFibGVzLWRlLWFpcmUvQ29uZGVuc2Fkb3ItdmFyaWFibGUtZGUtMjAzMzBwRi1IaWRyb2lsOzZjYmY1Mzk0ZmZmMzhhNWE0N2E1Yjk4ZDZiMDZhYzk2&dac=4

For those who can't even see the above link..

http://tinyurl.com/hidroil-cap

It seems to be another page from the same vendor but with a different illustration.

Here is the description...

"Variable capacitor, with servomotor. 20/330pF 7.5 Kvols.
In airtight ABS. Condenser motor and immersed in a dielectric HIDROIL.
With tubing connection 28mm bronze. You can request other connection.
Condenser for conducting a large loop antenna performance."

7.5 kV! I guess that is for a rather high power transmitter.

Rick

10219. RE: CapCo AMA-4 Top band loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-13 17:03:56 UTC
From: <paul@...>
Topic: 10177 Message: 10219

I have taken more photos of my top band loop and the inner workings ETC
http://www.g0hwc.com/antennas.html
I would like to have some way of knowing location of the tuning of the cap
and would like advice on this? Maybe some sort or encoder or pot ?

I have added a close up of the motor gearbox fitting to the cap in the above
link.

Many thanks
Paul G0HWC
http://www.g0hwc.com

---In loopantennas@yahoogroups.com, <paul@...> wrote:

Hi all,
I have a rare CapCo AMA-4 top band / 80m loop and find even with the control box
set to fine tune and set to slowest thats its still too fast. Has anyone got one of these
loops that they have ether modified the gear box or fitted a new motor ?

Paul G0HWC
Photos of my loop Here:
http://www.g0hwc.com/antennas.html

10220. Re: [loopantennas] RE: CapCo AMA-4 Top band loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-14 00:57:09 UTC
From: Andy Gardner
Topic: 10177 Message: 10220

A pot geared into the capacitor drive fed into an ADC would give a good indication of the position of the capacitor.

I am building (slowly!) a remote tuned receive loop. It uses a garden variety superhet variable capacitor and since I only needed 2 of the 3 banks of the capacitor (and the 3rd had less vanes) I removed all but one of the vanes in the 3rd bank and cut the remaining middle vane to use it as an interruptor which triggers opto endstops.

In the original software version, I would step the capacitor to one endstop, then count the number of pulses needed to get to the other endstop, and then I knew exactly where the capacitor was by keeping track of pulses fed to the stepper.

In the current version, I don't even bother doing that. When the unit is turned on, where ever the capacitor is at the time is position 0, and I keep track of the pulse from there, giving positions that can be -ve of +ve. The arduino knows what frequency the radio is tuned to, and I manually tune the loop with push buttons, and when peaked I store the capacitor position in memory and the arduino then knows what capacitor position to move to when the tuner is at frequency x. Once I've stored a few positions across the band, the arduino can estimate the correct capacitor position, and as I manually peak each position, the arduino stores more data points and can more accurately esitmate. The arduino has an LED to let me know when it's on a frequency that has been manually peaked. After a few minutes of tuning around the band, the loop is fully tuned, and I can then just move the receiver frequency around and the loop auto-tracks it.

You have to be careful you feed the pulses to the stepper at a pulse rate the motor likes, or some pulses will be lost and your positioning data goes pear-shaped.

Once I repair my R8 (it has corroded internal "TMP" rf connectors - and I'm having trouble getting replacements), I'll put a video up.

Andy
ZL3APG

On 14/10/2013, at 6:03 AM, <paul@...> wrote:

>
> I have taken more photos of my top band loop and the inner workings ETC
>
> http://www.g0hwc.com/antennas.html
>
> I would like to have some way of knowing location of the tuning of the cap
>
> and would like advice on this? Maybe some sort or encoder or pot ?
>
> I have added a close up of the motor gearbox fitting to the cap in the above
>
> link.

```
>
>
>
> Many thanks
>
> Paul G0HWC
>
> http://www.g0hwc.com
```

10221. Re: [loopantennas] RE: CapCo AMA-4 Top band loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-14 14:21:05 UTC
From: John Sterkeson
Topic: 10177 Message: 10221

Hi Andy. Try this link for TMP connectors source.... http://therfc.com/taiko.htm
These connectors were commonly used in many Motorola base and mobile radios at one time.
The silver plating becomes tarnished and can be removed with a pencil eraser.
Good luck!
John...

From: Andy Gardner
Sent: Sunday, October 13, 2013 7:57 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] RE: CapCo AMA-4 Top band loop

A pot geared into the capacitor drive fed into an ADC would give a good indication of the position of the capacitor.

I am building (slowly!) a remote tuned receive loop. It uses a garden variety superhet variable capacitor and since I only needed 2 of the 3 banks of the capacitor (and the 3rd had less vanes) I removed all but one of the vanes in the 3rd bank and cut the remaining middle vane to use it as an interruptor which triggers opto endstops.

In the original software version, I would step the capacitor to one endstop, then count the number of pulses needed to get to the other endstop, and then I knew exactly where the capacitor was by keeping track of pulses fed to the stepper.

In the current version, I don't even bother doing that. When the unit is turned on, where ever the capacitor is at the time is position 0, and I keep track of the pulse from there, giving positions that can be -ve of +ve. The arduino knows what frequency the radio is tuned to, and I manually tune the loop with push buttons, and when peaked I store the capacitor position in memory and the arduino then knows what capacitor position to move to when the tuner is at frequency x. Once I've stored a few positions across the band, the arduino can estimate the correct capacitor position, and as I manually peak each position, the arduino stores more data points and can more accurately esitmate. The arduino has an LED to let me know when it's on a frequency that has been manually peaked. After a few minutes of tuning around the band, the loop is fully tuned, and I can then just move the receiver frequency around and the loop auto-tracks it.

You have to be careful you feed the pulses to the stepper at a pulse rate the motor likes, or some pulses will be lost and your positioning data goes pear-shaped.

Once I repair my R8 (it has corroded internal "TMP" rf connectors - and I'm having trouble getting replacements), I'll put a video up.

Andy
ZL3APG

On 14/10/2013, at 6:03 AM, <paul@...> wrote:

>
> I have taken more photos of my top band loop and the inner workings ETC
>
> http://www.g0hwc.com/antennas.html
>
> I would like to have some way of knowing location of the tuning of the cap
>
> and would like advice on this? Maybe some sort or encoder or pot ?
>
> I have added a close up of the motor gearbox fitting to the cap in the above
>
> link.
>
>
>
> Many thanks
>
> Paul G0HWC
>
> http://www.g0hwc.com

10222. Re: [loopantennas] Variable capacitor 30/700 HIDROIL

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-16 21:49:27 UTC
From: Steinar Aanesland
Topic: 10111 Message: 10222

Hi Todd,

I am sorry for not responding earlier. I have had a lot of work to do lately.

Yes , I think it is a motorized tuning and remote control for a capacitor .

I can not read the language, but I am using Google translator.

I was doing a Google search and came across this page (translated from French to English):

http://translate.google.no/translate?hl=no&sl=fr&tl=en&u=http%3A%2F%2Fj28ro.blogspot.no%2F2013%2F05%2Finac-ah-521-antenne-loop-magnetique.html

The antenna is us using the capacitor, and the system seems interesting.

LA5VNA Steinar

On 13.10.2013 19:58, toddroberts2001@... wrote:
> Hi Steinar,
> When I tried to read about the Hidroil capacitor I could never download
> the full page. For some reason my browser would lock up when trying
> to download the full page. Sorry to say I cannot read the language
> either.
>
> Could you describe to us what the Hidroil capacitor is? It looks like
> someone put together an interesting high-power capacitor for a
> transmitting loop antenna with some kind of built-in motorized
> tuning and remote control? It looks like nice wide copper tabs to
> make connections to the loop.
>
> Is the capacitor immersed in some kind of oil? What does the
> 30/700 number stand for? Thanks for any additional info.
>
> 73 - Todd WD4NGG
>
>
> In a message dated 10/13/2013 11:14:49 A.M. Eastern Daylight Time,
> saanes@... writes:
>
> OK, probably not :)
>
> LA5VNA S
>
> On 11.10.2013 13:54, Steinar Aanesland wrote:
>> Hi all,

>>
>> This is my first writing to the group, but I have been lurking around
>> for awhile.
>> Does any of you guys know this product?
>> http://inac-radio.com/en/Condensador-variable-de-30700-Hidroil
>>
>> LA5VNA Steinar
>
>
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!Yahoo! Groups Links
>
>
>
>
>

10223. 2.5-25KV BUTTERFLY CAPACITOR KIT VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-15 15:19:38 UTC
From: <pop_vasile@...>
Topic: 10223 Message: 10223

2.5-25KV BUTTERFLY CAPACITOR KIT VA6POP I can build for u any air variable capacitors kits https://www.youtube.com/watch? v=thw0RLOh6zM https://www.youtube.com/watch?v=thw0RLOh6zM www.youtube.com/watch?v=fV- FWFQO6As http://www.youtube.com/watch?v=fV-FWFQO6As www.youtube.com/watch?v= dmZxgmalP9g http://www.youtube.com/watch?v=dmZxgmalP9g http://forums.qrz.com/ showthread.php?351604- Butterfly-capacitor-kits-5- 15kv http://forums.qrz.com/showthread.php?351604-Butterfly-capacitor-kits-5-15kv http://www.flickr.com/photos/ 93005502@N08/page3/ http://www.flickr.com/photos/93005502@N08/page3/ http://forums.qrz.com/ showthread.php?378701-2-5- 15kv-butterfly-capacitor-kits& p=\ http://forums.qrz.com/showthread.php?378701-2-5-15kv-butterfly-capacitor-kits&p=%5C 2764980#post2764980 http://groups.yahoo.com/group/ loopantennas/photos/album/ 1355109643/pic/list http://groups.yahoo.com/group/loopantennas/photos/album/1355109643/pic/list http://groups.yahoo.com/group/ loopantennas/photos/album/ 1356390600/pic/list http://groups.yahoo.com/group/loopantennas/photos/album/1356390600/pic/list I have kits: 2.5" OD ROTOR 3" OD ROTOR 4" OD ROTOR 5" OD ROTOR 6" OD ROTOR 8" OD ROTOR 10" OD ROTOR
VA6POP 403-240-1813 yo5bzz(at)gmail.com http://gmail.com/

10224. 2.5,3,4,5,6,8,10" OD butterfly capacitor kits

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-15 15:04:22 UTC
From: <pop_vasile@...>
Topic: 10224 Message: 10224

2.5-25KV BUTTERFLY CAPACITOR KIT VA6POP I can build for u any air variable capacitors kits
https://www.youtube.com/watch?v=thw0RLOh6zM https://www.youtube.com/watch?v=thw0RLOh6zM
www.youtube.com/watch?v=fV-FWFQO6As http://www.youtube.com/watch?v=fV-FWFQO6As
www.youtube.com/watch?v=dmZxgmalP9g
http://forums.qrz.com/showthread.php?351604-Butterfly-capacitor-kits-5-15kv
http://www.flickr.com/photos/93005502@N08/page3/
http://forums.qrz.com/showthread.php?378701-2-5-15kv-butterfly-capacitor-kits&p=\
2764980#post2764980
http://groups.yahoo.com/group/loopantennas/photos/album/1355109643/pic/list
http://groups.yahoo.com/group/loopantennas/photos/album/1356390600/pic/list

I have kits: 2.5" OD□ ROTOR 3" OD□ ROTOR 4" OD ROTOR 5" OD ROTOR 6" OD ROTOR 8" OD ROTOR
10" OD ROTOR
VA6POP yo5bzz(at)gmail.com

10225. Old Military Tuners

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-17 13:58:35 UTC
From: Ron Polityka
Topic: 10225 Message: 10225

Hello,

Just wondering if there would be a use for the old military tuners that I have in the shack.

Look down at the bottom of the page for the pictures.

http://www.wb3aal.com/4-Sale.htm

If any one would be interested, make an offer. The could be going to the scrap yard next week.

73
Ron de WB3AAL

FYI - I am on the Digest mode for the list. If interested, please e-mail me direct.

10226. Re: [loopantennas] Old Military Tuners

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-18 02:02:52 UTC
From: Jim Hill
Topic: 10225 Message: 10226

Ron: Suggest you join the Milsurplus qth.net reflector and list the tuning units there. Go to https://qsl.net/ , go to email mailing lists, then Directory of Lists, search for Milsurplus, and click on it.
Jim, w6ivw

At 06:58 AM 10/17/2013, Ron Polityka wrote:
>
>
>Hello,
>
>Just wondering if there would be a use for the old military
>tuners that I have in the shack.

10227. Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 00:11:57 UTC
From: <ihmeyers19@...>
Topic: 10227 Message: 10227

Has anyone experimented with phasing a rotatable loop against an active whip or vertical? I have a Pixel Loop and a DX Engineering vertical and I have just begin playing around with phasing them through a DXE NCC-1 phaser. I often like then end results but it's a lot to adjust

a) loop direction
b) loop gain
c) vertical gain
d) phase
e) relative balance between the 2

Any tips or suggestions would be greatly appreciated.

73,
Ian
Florida,USA

10228. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 11:04:47 UTC
From: Andrew Ikin
Topic: 10227 Message: 10228

Ian, wrote on October 20.

Has anyone experimented with phasing a rotatable loop against an active whip or vertical? I have a Pixel Loop and a DX Engineering vertical and I have just begin playing around with phasing them through a DXE NCC-1 phaser. I often like then end results but it's a lot to adjust

a) loop direction
b) loop gain
c) vertical gain
d) phase
e) relative balance between the 2

Any tips or suggestions would be greatly appreciated.

Ian, I used to do something similar to what you have described many years ago. I soon came to the conclusion that the whole excise is a waste of time. The main reasons are; the achievable null is too narrow in relation to frequency. The nulls are not stable with time i.e. small variations is signal arrival angles. The later makes the system unusable for HF. The DXE phaser is not suitable for wideband operation i.e. it can't provide a constant phase shift with varying frequency. This would be a essential requirement when phasing a loop with a whip because a constant 90 degree phasing +/- any antenna phase variation is required.

Maybe someone else in the group could recommend a 2 input SDR that could provide constant phasing verses frequency????

A small improvement can be had by using a longwire antenna for the Vertical instead of an active Whip.

If your interest is mainly phasing for LW and MW and you want the phasing to the be stable over a wide bandwidth, then you need to use identical antennas and a variable crossfire phasing unit. For example the type used on some of Wellbrook's Phased arrays.

A compact 360 degree system could be a Wellbrook Phaser and 4 Clifton Labs Active Whips, these offer much better IMD performance compared to Dxe whips. Or you could use 4 ALA100s. The recommended minimum antenna spacing is 20m

However, if you just need a wideband rotateable antenna with a cardioid pattern, then consider a small Flag antenna. This can be home made or one could use commercial Head Amplifier.

73

Andrew

10229. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 13:12:33 UTC
From: toddroberts2001@...
Topic: 10227 Message: 10229

I have had outstanding results using a Dallas Lankford-designed phaser on medium wave using a rotatable M0AYF loop and a Steve Ratzlaff active whip both located in my back yard about 30 ft apart. Steve kindly loaned me one of his Lankford phasers to try and it is the best one I have ever used.

You can read about the Lankford MW #2 Phaser at this address :

http://docs7.chomikuj.pl/1992228534,PL,0,0,MW-Phaser-%232.pdf (http://docs7.chomikuj.pl/1992228534,PL,0,0,MW-Phaser-#2.pdf)

The phaser in the article is optimized for medium wave but it can be easily modified for SW use also. The one I am using has six bands from the 300 kHz to 14 mHz range.

The Lankford phaser is more forgiving than most on signal levels from each antenna and they don't have to be perfectly matched although you can get the best nulls if signal levels from each antenna are roughly equal. For best results with the phaser the loop should be rotated for best signal from the offending station, not a null.

With the Lankford phaser I am able to null out a local station on 1490 kHz 12 miles away right down into the noise level and hear another distant station on 1490 almost exactly 180 degrees opposite, something I was never able to do with a loop antenna alone due to the figure 8 pattern of the loop.

Once I set the Lankford phaser it remains stable for days on end.

I also have a Quantum Phaser and I would rate it a very close second. The Quantum has only 3 controls to adjust and the settings are a little more critical, but once adjusted I would say the nulls are about equal to the more complicated Lankford phaser. If someone did not want to have to build their own phaser I would recommend the Quantum phaser.

Using a broadband loop and an active whip are one of the best combinations for a phaser and requires the least spacing between the two antennas.

73 - Todd WD4NGG

In a message dated 10/20/2013 7:04:54 A.M. Eastern Daylight Time, andrew.ikin@... writes:

Ian, wrote on October 20.

Has anyone experimented with phasing a rotatable loop against an active whip or vertical? I have a Pixel Loop and a DX Engineering vertical and I have just begin playing around with phasing them through a DXE NCC-1 phaser. I often like then end results but it's a lot to adjust

a) loop direction
b) loop gain
c) vertical gain
d) phase
e) relative balance between the 2

Any tips or suggestions would be greatly appreciated.

10230. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 14:00:07 UTC
From: Chris Trask
Topic: 10227 Message: 10230

>
> > Has anyone experimented with phasing a rotatable loop against an active whip or vertical? I have a
> > Pixel Loop and a DX Engineering vertical and I have just begin playing around with phasing them
> > through a DXE NCC-1 phaser. I often like then end results but it's a lot to adjust
> >
> > a) loop direction
> > b) loop gain
> > c) vertical gain
> > d) phase
> > e) relative balance between the 2
> >
> > Any tips or suggestions would be greatly appreciated.
>
>Ian, I used to do something similar to what you have described many years ago. I soon came to the
>conclusion that the whole excise is a waste of time. The main reasons are; the achievable null is
>too narrow in relation to frequency. The nulls are not stable with time i.e. small variations is
>signal arrival angles. The later makes the system unusable for HF. The DXE phaser is not suitable
>for wideband operation i.e. it can't provide a constant phase shift with varying frequency. This
>would be a essential requirement when phasing a loop with a whip because a constant 90 degree
>phasing +/- any antenna phase variation is required.
>
>Maybe someone else in the group could recommend a 2 input SDR that could provide constant phasing
>verses frequency????
>

I designed my own a few years ago, and I added the brief PDF file "Antenna Canceller Prototype 02.pdf" to the group files section. It is used with an orthogonal pair of loops for both noise cancelling and electronic steering, and can also be used with a loop and whip combination.

Chris

10231. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 14:04:19 UTC
From: Chris Trask
Topic: 10227 Message: 10231

>
>I have had outstanding results using a Dallas Lankford-designed phaser on
>medium wave
>using a rotatable M0AYF loop and a Steve Ratzlaff active whip both located
>in my back yard
>about 30 ft apart. Steve kindly loaned me one of his Lankford phasers to
>try and it is the
>best one I have ever used.
>
>You can read about the Lankford MW #2 Phaser at this address :
>
>_http://docs7.chomikuj.pl/1992228534,PL,0,0,MW-Phaser-%232.pdf_
>(http://docs7.chomikuj.pl/1992228534,PL,0,0,MW-Phaser-#2.pdf)
>

That's interesting. That entire website is blocked by the ISP that provides the WiFi service here due to malicious content. Could someone forward that PDF file to me?

Chris

10232. Rolled a loop using a Harbor freight tube roller

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 15:00:10 UTC
From: everettsharp@...
Topic: 10232 Message: 10232

Hi Guys.

I just finished rolling a 10' long piece of 3/4" hard, type L, copper tubing that I picked up this morning at Home Depot, using a Harbor Freight Tube Roller. The outside diameter of the copper pipe was 7/8". The smallest roller diameter that comes with the HF tubing roller is 1", which worked out okay. It took about 10, or so, passes (less than 5 minutes) to finish the loop. I only took half turn adjustments with the adjustment screw on the drive roller, with each pass.

The other rollers that come with the Harbor Freight tubing roller are 1.5" and 2". There is a after market seller of other size rollers and I may invest in them later. The main drive roller does have ball bearings that the shaft runs through. I know that HF sells a lot of junk, but this tubing roller is a good value.

If anyone is interested in buying one you can look on line at the HF site, you will have to type "tubing roller" into the search to find it. The sale price is $169.99. If you do a online search for HF coupons you should be able to fine one for 25% off, thus making the cost around $127 + shipping. They also have a $6.95 FEDX shipping deal too.

The finished loop look very nice and it ended up at about 1 meter in diameter. In the next few days I plan on rolling some 1.5" 6061 T6 Aircraft tubing, which is 12' long.

Everett N8CNP

10233. RE: Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 15:12:31 UTC
From: <ihmeyers19@...>
Topic: 10227 Message: 10233

Thanks for all the replies.

I would love to set up some type of 4 square phased array but I think I am pushing it now with my HOA. The last place we lived the HOA made me take down all my antennas and I don't want to risk what I already have.

Interesting comments re the DEX phase. I have Quantum phaser packed away, haven't used it since I upgraded to the DXE unit. I think I'll pull it out today and see how it does.

Andy's comments re the fussiness of the nulls using this set-up is spot on . It's why I give up using it every few days and then pack the phaser away for months. It wasn't a good investment of $600...

Thanks again.

73,
Ian

---In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

I have had outstanding results using a Dallas Lankford-designed phaser on medium wave using a rotatable M0AYF loop and a Steve Ratzlaff active whip both located in my back yard about 30 ft apart. Steve kindly loaned me one of his Lankford phasers to try and it is the best one I have ever used.

You can read about the Lankford MW #2 Phaser at this address :

http://docs7.chomikuj.pl/1992228534,PL,0,0,MW-Phaser-%232.pdf
http://docs7.chomikuj.pl/1992228534,PL,0,0,MW-Phaser-%232.pdf

The phaser in the article is optimized for medium wave but it can be easily modified for SW use also. The one I am using has six bands from the 300 kHz to 14 mHz range.

The Lankford phaser is more forgiving than most on signal levels from each antenna and they don't have to be perfectly matched although you can get the best nulls if signal levels from each antenna are roughly equal. For best results with the phaser the loop should be rotated for best signal from the offending station, not a null.

With the Lankford phaser I am able to null out a local station on 1490 kHz 12 miles away right down into the noise level and hear another distant station on 1490 almost exactly 180 degrees opposite, something I was never able to do with a loop antenna alone due to the figure 8 pattern of the loop.

Once I set the Lankford phaser it remains stable for days on end.

I also have a Quantum Phaser and I would rate it a very close second. The Quantum has only 3 controls to adjust and the settings are a little more critical, but once adjusted I would say the nulls are about equal to the more complicated Lankford

phaser. If someone did not want to have to build their own phaser I would recommend the Quantum phaser.

Using a broadband loop and an active whip are one of the best combinations for a phaser and requires the least spacing between the two antennas.

73 - Todd WD4NGG

In a message dated 10/20/2013 7:04:54 A.M. Eastern Daylight Time, andrew.ikin@... writes:

Ian, wrote on October 20.

Has anyone experimented with phasing a rotatable loop against an active whip or vertical? I have a Pixel Loop and a DX Engineering vertical and I have just begin playing around with phasing them through a DXE NCC-1 phaser. I often like then end results but it's a lot to adjust

a) loop direction
b) loop gain
c) vertical gain
d) phase
e) relative balance between the 2

Any tips or suggestions would be greatly appreciated.

10234. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 16:20:00 UTC
From: Jim
Topic: 10227 Message: 10234

The schematic shows one winding of T4 shorted!

Is this an error in the schematic? If not, one could eliminate T4 and just use a solid wire connection.

Thoughts?

Jim
----- Original Message -----
From: toddroberts2001@aol.com
To: loopantennas@yahoogroups.com
Sent: Sunday, October 20, 2013 6:12 AM
Subject: Re: [loopantennas] Loop / Whip Phasing

I have had outstanding results using a Dallas Lankford-designed phaser on medium wave using a rotatable M0AYF loop and a Steve Ratzlaff active whip both located in my back yard about 30 ft apart. Steve kindly loaned me one of his Lankford phasers to try and it is the best one I have ever used.

You can read about the Lankford MW #2 Phaser at this address :

http://docs7.chomikuj.pl/1992228534,PL,0,0,MW-Phaser-%232.pdf

The phaser in the article is optimized for medium wave but it can be easily modified for SW use also. The one I am using has six bands from the 300 kHz to 14 mHz range.

The Lankford phaser is more forgiving than most on signal levels from each antenna and they don't have to be perfectly matched although you can get the best nulls if signal levels from each antenna are roughly equal. For best results with the phaser the loop should be rotated for best signal from the offending station, not a null.

With the Lankford phaser I am able to null out a local station on 1490 kHz 12 miles away right down into the noise level and hear another distant station on 1490 almost exactly 180 degrees opposite, something I was never able to do with a loop antenna alone due to the figure 8 pattern of the loop.

Once I set the Lankford phaser it remains stable for days on end.

I also have a Quantum Phaser and I would rate it a very close second. The Quantum has only 3 controls to adjust and the settings are a little more critical, but once adjusted I would say the nulls are about equal to the more complicated Lankford phaser. If someone did not want to have to build their own phaser I would recommend the Quantum phaser.

Using a broadband loop and an active whip are one of the best combinations for a phaser and requires the least spacing between the two antennas.

73 - Todd WD4NGG

In a message dated 10/20/2013 7:04:54 A.M. Eastern Daylight Time, andrew.ikin@btconnect.com writes:

Ian, wrote on October 20.

Has anyone experimented with phasing a rotatable loop against an active whip or vertical? I have a Pixel Loop and a DX Engineering vertical and I have just begin playing around with phasing them through a DXE NCC-1 phaser. I often like then end results but it's a lot to adjust

a) loop direction
b) loop gain
c) vertical gain
d) phase
e) relative balance between the 2

Any tips or suggestions would be greatly appreciated.

10235. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 16:39:19 UTC
From: Chris Trask
Topic: 10227 Message: 10235

>
>The schematic shows one winding of T4 shorted!
>
>Is this an error in the schematic? If not, one could eliminate T4 and just use a solid wire connection.
>
>Thoughts?
>

Yes, it's an error on the schematic. Transformers T4 and T5 should be connected just as T2 and T3.

Chris

10236. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 16:56:57 UTC
From: toddroberts2001@...
Topic: 10227 Message: 10236

Re : The Dallas Lankford MW Phaser #2 Schematic

No the wiring for the secondary of transformer T4 is NOT in error. Yes both sides
of the winding are connected to ground but this is part of the phasing circuit.
Remember the toroid winding is at RF potential so the windings are not actually "shorted" for RF.

For example look at a one turn transmitting loop antenna. It looks like a direct heavy short but NOT at RF.

I am holding the Lankford phaser in my hands right now and both sides of the
T4 secondary are connected to ground. Chris Trask is in error about this circuit.

73 - Todd WD4NGG

In a message dated 10/20/2013 12:20:05 P.M. Eastern Daylight Time, jbollit@... writes:

The schematic shows one winding of T4 shorted!

Is this an error in the schematic? If not, one could eliminate T4 and just use a solid wire connection.

Thoughts?

Jim

10237. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 18:51:48 UTC
From: Chris Trask
Topic: 10227 Message: 10237

```
>
>Re : The Dallas Lankford MW Phaser #2 Schematic
>
>No the wiring for the secondary of transformer T4 is NOT in error. Yes
>both sides of the winding are connected to ground but this is part of the
>phasing circuit. Remember the toroid winding is at RF potential so the
>windings are not actually "shorted" for RF.
>
>For example look at a one turn transmitting loop antenna. It looks like a
>direct heavy short but NOT at RF.
>
>I am holding the Lankford phaser in my hands right now and both sides of
>the T4 secondary are connected to ground. Chris Trask is in error about
>this circuit.
>
```

Then we should consider that the purpose of the shorted T3 is to compensate for the parasitics of T1. Then it makes sense.

For those who have built this, what are the results of replacing T3 with a piece of wire?

Chris

10238. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 20:06:23 UTC
From: Jim
Topic: 10227 Message: 10238

Chris,

I have built one.

When you say "replace with a wire" are you talking about a single turn through the core, or leave the other winding on T4 (at the only winding on the core) and repalce the shorted turns with a piece of wire that does NOT pass through the torroid?

Or is there something else you want me to try.

I have my phaser open, here on my bench.

Let me know.

Jim

----- Original Message -----
From: Chris Trask
To: loopantennas@yahoogroups.com ; loopantennas@yahoogroups.com
Sent: Sunday, October 20, 2013 11:51 AM
Subject: Re: [loopantennas] Loop / Whip Phasing

>
>Re : The Dallas Lankford MW Phaser #2 Schematic
>
>No the wiring for the secondary of transformer T4 is NOT in error. Yes
>both sides of the winding are connected to ground but this is part of the
>phasing circuit. Remember the toroid winding is at RF potential so the
>windings are not actually "shorted" for RF.
>
>For example look at a one turn transmitting loop antenna. It looks like a
>direct heavy short but NOT at RF.
>
>I am holding the Lankford phaser in my hands right now and both sides of
>the T4 secondary are connected to ground. Chris Trask is in error about
>this circuit.
>

Then we should consider that the purpose of the shorted T3 is to compensate for the parasitics of T1. Then it makes sense.

For those who have built this, what are the results of replacing T3 with a piece of wire?

Chris

10239. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 20:11:52 UTC
From: Chris Trask
Topic: 10227 Message: 10239

>
>When you say "replace with a wire" are you talking about a single turn through the core, or leave the other
>winding on T4 (at the only winding on the core) and repalce the shorted turns with a piece of wire that
>does NOT pass through the torroid?
>
>Or is there something else you want me to try.
>
>I have my phaser open, here on my bench.
>

Remove T3 entirely and replace the broken primary winding connection with a piece of wire.

Chris

10240. RE: Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 20:19:50 UTC
From: <ihmeyers19@...>
Topic: 10227 Message: 10240

Todd WD4NGG: The Lankford phaser is more forgiving than most on signal levels from each antenna
and they don't have to be perfectly matched although you can get the best nulls
if signal levels from each antenna are roughly equal. For best results with the phaser
the loop should be rotated for best signal from the offending station, not a null.

Todd,

So what you're saying in my case if I am looking to null all the Cuban pests S/SE of me I should point the loop S/SE and phase that against the whip rather than pointing the loop 90 degrees which weaken the Cubans considerably and phasing from there.

Thanks very much.

73,
Ian

---In loopantennas@yahoogroups.com, <christrask@...> wrote:

>
>When you say "replace with a wire" are you talking about a single turn through the core, or leave the other
>winding on T4 (at the only winding on the core) and repalce the shorted turns with a piece of wire that
>does NOT pass through the torroid?
>
>Or is there something else you want me to try.
>
>I have my phaser open, here on my bench.
>

Remove T3 entirely and replace the broken primary winding connection with a piece of wire.

Chris

10241. Re: [loopantennas] Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 20:45:45 UTC
From: Jim
Topic: 10227 Message: 10241

Chris,

I will do this.

Need to connect phaser to antennas per schematic and get a base line on a station.

Then will do the shorted wire test.

Will advise.

Jim
----- Original Message -----
From: Chris Trask
To: loopantennas@yahoogroups.com ; loopantennas@yahoogroups.com
Sent: Sunday, October 20, 2013 1:11 PM
Subject: Re: [loopantennas] Loop / Whip Phasing

>
>When you say "replace with a wire" are you talking about a single turn through the core, or leave the other
>winding on T4 (at the only winding on the core) and repalce the shorted turns with a piece of wire that
>does NOT pass through the torroid?
>
>Or is there something else you want me to try.
>
>I have my phaser open, here on my bench.
>

Remove T3 entirely and replace the broken primary winding connection with a piece of wire.

Chris

10242. Re: [loopantennas] RE: Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 20:47:59 UTC
From: toddroberts2001@...
Topic: 10227 Message: 10242

Hi Ian,
Yes when using a loop with a phaser the loop should be pointed at the offending
station or stations for maximum signal pickup, not broadside or oriented for
a null. You want Max pickup of the offending station or stations with the loop.

It sounds counter-intuitive at first to point the loop for max pickup of the station
you want to null but that is what works best with the phaser.

73 - Todd WD4NGG

In a message dated 10/20/2013 4:19:53 P.M. Eastern Daylight Time,
ihmeyers19@... writes:

Todd WD4NGG: The Lankford phaser is more forgiving than most on signal levels from each antenna
and they don't have to be perfectly matched although you can get the best nulls
if signal levels from each antenna are roughly equal. For best results with the phaser
the loop should be rotated for best signal from the offending station, not a null.

Todd,

So what you're saying in my case if I am looking to null all the Cuban
pests S/SE of me I should point the loop S/SE and phase that against the whip
rather than pointing the loop 90 degrees which weaken the Cubans
considerably and phasing from there.

Thanks very much.

73,
Ian

10243. Re: Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 21:43:57 UTC
From: Dean Wayman
Topic: 10227 Message: 10243

--- In loopantennas@yahoogroups.com, <ihmeyers19@...> wrote:
>
> Has anyone experimented with phasing a rotatable loop against an active whip or vertical? I have a Pixel Loop and a DX Engineering vertical and I have just begin playing around with phasing them through a DXE NCC-1 phaser. I often like then end results but it's a lot to adjust
>
> a) loop direction
> b) loop gain
> c) vertical gain
> d) phase
> e) relative balance between the 2
>
> Any tips or suggestions would be greatly appreciated.
>
> 73,
> Ian
> Florida,US
>I had done a lot of research online and asked a lot of questions here and on the chat for MWDX ,eventually i settled on this , I have been using this setup for 2 years :

Pixel Pro1A Loop
Cheap rotator from E.bay (for use on the loop on top of a 10 foot section of Rohn tower).
MFJ Remote active antenna (12-13 feet (East) of the loop,and grounded with a 8 foot copper pipe).
Quantum Phaser .

The whole thing is 50 feet from the house fed with RG6 coax ,buried in a slit trench.

At first i had trouble with what i was doing then all of a sudden one night i could chose which station i wanted to hear ,and they were 180 degrees from each other ,turns out that this setup can not handle sky-wave signals well,on those nights i just don't use the vertical or Phaser. Sky-Wave signals come from high angles so it's hard to use the null in any effective way .

Has it Brought me DX ? YES!!!
Was it worth it IMHO ? Yes!!

You need to now that my listening position is nearly in the center of North America ,so i need to be able to have some kind of steerable antenna to get the tuff ones .I have pulled Flea power station out from under 50KW flame throwers if the conditions are good ,if they are bad i don't get much.

I live 3 blocks from a 1KW station on 1350 ,there is no point DX ing until they power down at night and even then i have trouble around that Freq .

My log book includes both the west and East coast (I only DX at night),anyway you being in Florida about the only advantage i see would be Trans ocean DX as most of your signals will be coming from the W-NW direction?

The most important thing i did was grounding the vertical,after that was done ,the noise floor went down on that antenna ,and when lightning strikes are near they are less noticeable.

Normally i run the -20DB attenuator in the on position on the vertical ,it just seems to operate better with the pixel that way.

The pixel loop is normally very quiet ,however there are some times when conditions are not favorable for it.
It seems to me there is no perfect setup as far as antennas go ,but this one is pretty close?

I've been told that you can have zero separation between the vertical and loop but this is where i had a structure to place my setup so i have never tried it that close? it would be interesting to try it some time.

Yes it can be rather daunting to try and adjust this but after a while it becomes pretty easy ,some times no matter what you do you just can not get a clean copy ,when that happens i just move on and come back to that freq for the next 2 nights ,you would be surprised how many times I get that ID .

Any other questions ? let me know :)

Dean_0

10244. RE: Re: HIGH VOLTAGE BUTTERFLY CAPACITOR'S KITS FOR SALE

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-20 20:18:12 UTC
From: <pop_vasile@...>
Topic: 8994 Message: 10244

my e-mail is
yo5bzz(at)gmail.com

---In loopantennas@yahoogroups.com, <alienrelics@...> wrote:

Perhaps you should try emailing him directly, if you haven't done so yet.

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com mailto:loopantennas@yahoogroups.com, "Lew" <lew247@...> wrote:
>
> and still waiting...
> What's the point in someone advertising something saying how good they are, waits a few months and posts it again, and then posts on other places as well yet never comes back with a price
> Pointless.
>
> --- In loopantennas@yahoogroups.com mailto:loopantennas@yahoogroups.com, "Lew" <lew247@> wrote:
> >
> > Still waiting on prices
> >
> >
> > > the shipping can be less then $15.00
> > >
> > > in weekend I will do an estimation for yours butterfly capacitor.
> > >
> > >
> > >
> > > 73 de VA6POP
> > > Vasile
> >
>

10245. RE: Re: [loopantennas] RE: Loop / Whip Phasing

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-24 18:21:44 UTC
From: <ihmeyers19@...>
Topic: 10227 Message: 10245

I read this on JD's Loop Home page:
http://www.frontiernet.net/~jadale/Loop.htm

(4) Also please note that a balanced loop antenna can be spoiled to a cardioid pattern by putting a vertical sense antenna within its field.

Would some be so kind to explain to me how this would be effected? It sounds like a great idea in theory if the f/b ratio were any good. Where precisely would I place a whip to effect this?

Thanks very much.

73 and good DX,
Ian
Boynton Beach, Florida

---In loopantennas@yahoogroups.com, <loopantennas@yahoogroups.com> wrote:

Hi Ian,
Yes when using a loop with a phaser the loop should be pointed at the offending station or stations for maximum signal pickup, not broadside or oriented for a null. You want Max pickup of the offending station or stations with the loop.

It sounds counter-intuitive at first to point the loop for max pickup of the station you want to null but that is what works best with the phaser.

73 - Todd WD4NGG

In a message dated 10/20/2013 4:19:53 P.M. Eastern Daylight Time, ihmeyers19@... writes:

Todd WD4NGG: The Lankford phaser is more forgiving than most on signal levels from each antenna
and they don't have to be perfectly matched although you can get the best nulls if signal levels from each antenna are roughly equal. For best results with the phaser the loop should be rotated for best signal from the offending station, not a null.

Todd,

So what you're saying in my case if I am looking to null all the Cuban pests S/SE of me I should point the loop S/SE and phase that against the whip rather than pointing the loop 90 degrees which weaken the Cubans considerably and phasing from there.

Thanks very much.

73,
Ian

10246. ALA1530 with remote coax switch

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-24 12:40:45 UTC
From: <stefy.rob@...>
Topic: 10246 Message: 10246

Hello guys,
I would like connect my ALA1530 with my REMOTE COAX switch by Ameritron mod RCS-8VX.
Probably I have to connect the amplifier (and relative power supply) between Antenna and one of the 5 output of remote coax switch. Please confirm me...

Anybody have a situation like me ? Any suggestion for a better configuration?
Also , please note that remote unit of coax switch is driven by STATION MASTER from microham.

Thanks for any help and
73 de IZ2ODM

10247. Antenna rods and RF parts for sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-24 13:54:09 UTC
From: <bernardpeterson55@...>
Topic: 10247 Message: 10247

There are some interesting RF parts for sale including an 8kv vacuum relay for sale at http://www.rf-highvoltage.heliohost.org/rf.html

Also ceramic rotary switches and much more.

10248. Alex Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-24 14:25:26 UTC
From: Robert R
Topic: 10248 Message: 10248

HI iam looking for a Alex Loop or home Brew Alex Loop, Contact me here or at kb9iva@...
72/73's
Bob Kb9iva

10249. Re: HIGH VOLTAGE BUTTERFLY CAPACITOR'S KITS FOR SALE

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-27 18:07:18 UTC
From: rchetley
Topic: 8994 Message: 10249

Magnetic Loop antenna's tuning caps require the plates to be joined together (welded) no contact or wipers I did not see that you were doing this. I would love buy some of these variable caps but need the plates welded together. Do you do this or have someone to do this ?

--- In loopantennas@yahoogroups.com, "pop" <pop_vasile@...> wrote:
>
> Hi!
>
>
> I have kits available for:
>
> 3" OD ROTOR + 2 STATOR PLATES $3.50
> 4" OD ROTOR + 2 STATOR PLATES $5.00
> 5" OD ROTOR + 2 STATOR PLATES $5.75
> 6" OD ROTOR + 2 STATOR PLATES $6.75
> 8" OD ROTOR + 2 STATOR PLATES $9.50
>
> the objective of producing and selling a variety of components and
> kits for use in the construction and home-brew of Butterfly Type
> Variable Capacitors,voltage 2.5-15KV
> A "Butterfly Capacitor" is a variable capacitor which usually consists
> of a "cold" rotor plate and two independent stator plates that oppose
> each other. The rotor plate's shape resembles that of a butterfly,
> hence the name "Butterfly Capacitor". Butterfly Capacitors are
> typically used in symmetrical tuned circuits such as RF power
> amplifier stages in push-pull configuration, antenna tuners and in
> high current applications as needed in magnetic loop antenna circuits.
>
> These type of capacitors are no longer main stream, nor widely
> produced any longer, and therefore usually hard to find. When you do
> find them, they are not cheap.
> We are striving to keep costs to a minimum so that the average
> hobbyist can afford to home-brew RF Amplifiers, Antenna Tuners,
> Magnetic Loop Antennas and various other RF related items. One way
> that we are able to make our Butterfly Capacitors affordable is to
> leave the final assembly for the end user to perform.
>
> We provide the parts that require special equipment to manufacture,
> such as our CNCr. With our CNC , we are able to produce precision
> parts, namely the rotor and stator plates. The end user can then stack
> the plates on some threaded aluminum rod, using pieces of tube or nuts
> as spacers, thereby saving a large portion of the cost of what a fully
> assembled unit would be. The items required to finish a capacitor can
> be found at your local hardware store. We can also supply these items

> for a slight additional cost.
>
> WE CAN ALSO SUPPLY THESE PARTS FOR ASSEMBLING (,ALUMINUM SPACERS,PLASTIC END PLATES) FOR AN ADDITIONAL COST
>
> If you are unable, or not interested in constructing your own
> capacitor with the parts we supply and would rather have one delivered
> in ready to install condition, please contact us for a quote.
>
>
> 73 de VA6POP
> Vasile
>
>
> Now I'm building a Jumbo capacitor 15.000V
> using 6" and 8" OD rotor blades
> distance between plates 1.25"
>

10250. Re: [loopantennas] Re: HIGH VOLTAGE BUTTERFLY CAPACITOR'S KITS FOR SALE

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-30 03:40:59 UTC
From: Adrian Flynn
Topic: 8994 Message: 10250

Don't hold your hopes up for an answer, I have asked a question 3 times in
3 weeks on one and *No Answer!*
**
73
Adrian KF7DYU

On Sun, Oct 27, 2013 at 2:07 PM, rchetley <n1ndf@...> wrote:

> **
>
>
> Magnetic Loop antenna's tuning caps require the plates to be joined
> together (welded) no contact or wipers I did not see that you were doing
> this. I would love buy some of these variable caps but need the plates
> welded together. Do you do this or have someone to do this ?
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> --- In loopantennas@yahoogroups.com, "pop" <pop_vasile@...> wrote:
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> > These type of capacitors are no longer main stream, nor widely
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> END PLATES) FOR AN ADDITIONAL COST
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> > If you are unable, or not interested in constructing your own
> > capacitor with the parts we supply and would rather have one delivered
> > in ready to install condition, please contact us for a quote.
> >
> >
> > 73 de VA6POP
> > Vasile
> >
> >
> > Now I'm building a Jumbo capacitor 15.000V
> > using 6" and 8" OD rotor blades
> > distance between plates 1.25"
> >
>
>
>

10251. RE: Re: HIGH VOLTAGE BUTTERFLY CAPACITOR'S KITS FOR SALE

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-30 15:17:52 UTC
From: <jwin95@...>
Topic: 8994 Message: 10251

Is this really necessary in a butterfly capacitor? Doesn't the current flow from one set of vanes on one side to the other?

On a regular non-butterfly air variable capacitor the current from the individual vanes will 'sum' at the rotor and pass through the wiper ... but in a butterfly design doesn't the current traverse from say, the left vane to the right vane? If the vanes are one-piece, what would be the value of welding or soldering them to the rotor?

Jim

---In loopantennas@yahoogroups.com, <n1ndf@...> wrote:

Magnetic Loop antenna's tuning caps require the plates to be joined together (welded) no contact or wipers I did not see that you were doing this. I would love buy some of these variable caps but need the plates welded together. Do you do this or have someone to do this ?

--- In loopantennas@yahoogroups.com mailto:loopantennas@yahoogroups.com, "pop" <pop_vasile@...> wrote:
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> Hi!
>
>
> I have kits available for:
>
> 3" OD ROTOR + 2 STATOR PLATES $3.50
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>
> If you are unable, or not interested in constructing your own
> capacitor with the parts we supply and would rather have one delivered
> in ready to install condition, please contact us for a quote.
>
>
> 73 de VA6POP
> Vasile
>
>
> Now I'm building a Jumbo capacitor 15.000V
> using 6" and 8" OD rotor blades
> distance between plates 1.25"
>

10252. Magloop 8

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-31 10:11:56 UTC
From: <gi4xfn@...>
Topic: 10252 Message: 10252

Has anybody used this antenna as i need advice on how to mount the small loop.

Regards Steve Smith GI4XFN

10253. Re: [loopantennas] Magloop 8

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-31 15:48:26 UTC
From: Mike N9LSD
Topic: 10252 Message: 10253

I am now gathering components to build this ant. The small loop must be 1/5 th the circumference of the large one and directly opposite the cap. Mike N9LSD

On Thu, Oct 31, 2013 6:11 AM EDT gi4xfn@... wrote:

>Has anybody used this antenna as i need advice on how to mount the small loop.
>
>
> Regards Steve Smith GI4XFN

10254. Re: [loopantennas] Magloop 8

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-10-31 15:49:31 UTC
From: Mike N9LSD
Topic: 10252 Message: 10254

I am now gathering components to build this ant. The small loop must be 1/5 th the circumference of the large one and directly opposite the cap. Mike N9LSD

On Thu, Oct 31, 2013 6:11 AM EDT gi4xfn@... wrote:

>Has anybody used this antenna as i need advice on how to mount the small loop.
>
>
> Regards Steve Smith GI4XFN

10255. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-01 11:49:48 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10255

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10256. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-01 11:49:48 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10256

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10257. Sheilded loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-02 05:24:33 UTC
From: colin
Topic: 10257 Message: 10257

Hi,

I am new to this group and looking for a design for a shielded loop.

regards
Colin ZL1BTT

10258. Re: [loopantennas] Sheilded loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-02 14:05:37 UTC
From: Chris Trask
Topic: 10257 Message: 10258

```
>
>Hi,
>
>I am new to this group and looking for a design for a shielded loop.
>

Look in the group files section for my paper titled "Shielded Loop Aerials Rev 0.pdf".

Chris
```

10259. FSL antenna for sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-02 14:13:30 UTC
From: <everettsharp@...>
Topic: 10259 Message: 10259

If anyone is interested I have for sale a "One Of A Kind", 12" Diameter by 7.5" wide Tri-Coil Dual Band FSL. It covers both LW and MW bands, in two bands, MW 1745-470 KHz and LW 630- 150 KHz. It works very well and is a work of art. It can be used in an induction coupled, or 50 ohm configuration to your radio. The price is $500+, an estimated shipping cost, of $35 to $40. I will take PayPal payment. You can contact me off list at everettsharp (at) AOL if interested and I can email you more information and pictures. I wrote an article on this FSL and it is posted in the files section of several of the Yahoo sites.

I have too many antennas and it is time to downsize.

Everett N8CNP

10260. SSTML Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-02 22:56:41 UTC
From: Mike N9LSD
Topic: 10260 Message: 10260

If this post is OT, please tell me. I have a kenwood R-2000. Im also very weary of using it with a random longwire antenna.. I found the single turn receive-only antenna (subject) design . Does anyone have SWL experience with this antenna? I want to use it to hear Russian and Euro. Folk music. I live in Indiana. Feedback and comments very welcome. Mike N9LSD

10261. Commradio CR-1 For Sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-03 13:34:06 UTC
From: <everettsharp@...>
Topic: 10261 Message: 10261

I have for sale a Commradio CR-1, with battery, SN# 25, it is in like new condition. It has had both the encoder and main circuit board replaced (Rev. E). It is in perfect working order and has all the updated frameware installed. Also included with it is a, home made, broadband loop amplifier, that works off a 9 volt battery. You can hang a wire loop in your window and hook it to the amp and it works as well as most outside antennas..

The CR-1 has way better DSP then the Icom R75 and is outstanding on SSB. You can get all of the specifications on the Commradio web site http://commradio.com/ http://commradio.com/

I just have too many radios and it is time to downsize.

I am asking $500 for the CR-1 and I will pay the shipping to anywhere is the US. Commradio's current price is $599+shipping. Their lead times for the CR-1 are 3 to 4 weeks.

If anyone is interested please contact me off list at everettsharp (at) AOL

73 Everett N8CNP

10262. Re: [loopantennas] Digest Number 2357

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-04 12:02:19 UTC
From: Sal Cerda
Topic: 10262 Message: 10262

Steve, the links.txt file could use a good pruning.
Although it is a useful file, many of the links are dead.
Thanks,
Sal

On Saturday, November 2, 2013 6:43 AM, "loopantennas@yahoogroups.com"
<loopantennas@yahoogroups.com> wrote:

There are 2 messages in this issue.

Topics in this digest:

1.1. File - Links.txt
    From: loopantennas@yahoogroups.com

2.1. File - UploadingFilesLinksPhotos.txt
    From: loopantennas@yahoogroups.com

Messages

1.1. File - Links.txt
    Posted by: loopantennas@yahoogroups.com
    Date: Fri Nov 1, 2013 4:49 am ((PDT))

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb’s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
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> - Usually 20" to 24" in size
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>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
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http://www.frontiernet.net/~jadale/Loop.htm

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http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by

Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM
http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price

http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

Messages in this topic (59)

2.1. File - UploadingFilesLinksPhotos.txt
    Posted by: loopantennas@yahoogroups.com
    Date: Fri Nov 1, 2013 4:49 am ((PDT))

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

Messages in this topic (95)

If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!

Yahoo Groups Links

10263. 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 03:32:58 UTC
From: <qrp.gaijin@...>
Topic: 10263 Message: 10263

Greetings list members,

I have built the M0AYF active broadband loop antenna described at the link below. It works well (I use 2N3904 transistors).

http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html

I am wondering if it is possible to run this antenna off of very low voltage, 1.5 to 3 volts. What would be the recommended changes to the circuit, and what would be the likely impact on performance?

The reason for wanting to run it off of low voltage is that I want to incorporate this antenna as part of a low-voltage homebrew transistor shortwave receiver. The receiver itself runs off of 2 AAA rechargeable batteries. It would be nice if I could run the antenna off of the same power source.

Any comments appreciated.

10264. saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 00:01:46 UTC
From: <chuckunis@...>
Topic: 10264 Message: 10264

I have recently come across what appears to be a Saturn Halo 6M loop or a very well done copy. Does anybody know what kind of performance I can expect from this type of antenna?

Chuck
VA3RDR

10265. Re: [loopantennas] 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 13:27:24 UTC
From: Chris Trask
Topic: 10263 Message: 10265

>
> I have built the M0AYF active broadband loop antenna described at the link below. It works well (I use
>2N3904 transistors).
>
> http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html
>
> I am wondering if it is possible to run this antenna off of very low voltage, 1.5 to 3 volts. What
>would be the recommended changes to the circuit, and what would be the likely impact on performance?
>
> The reason for wanting to run it off of low voltage is that I want to incorporate this antenna as part
>of a low-voltage homebrew transistor shortwave receiver. The receiver itself runs off of 2 AAA rechargeable
>batteries. It would be nice if I could run the antenna off of the same power source.
>

You could, but the IMD (distortion) performance would be severfely impacted. You could approach that problem to some degree by replacing transformer T1 with high turns ratio, perhaps 1:9, so that the transistor collectors will see a very low load impedance. This will greatly reduce the signal voltage so that there will be a lesser tendency for the transistors to approach saturation or cutoff.

Also, the biasing arrangement will need some serious modification. I have a schematic in mind if you're interested.

Chris

10266. RE: Re: [loopantennas] 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 16:34:48 UTC
From: <qrp.gaijin@...>
Topic: 10263 Message: 10266

---In loopantennas@yahoogroups.com, <christrask@...> wrote:
> I have a schematic in mind if you're interested.

Thanks for the suggestions. Yes, I would be interested in any further schematic details you might provide, even if only tentative.

As an experiment I tried running the antenna off of about 2.4 volts, with no circuit changes. The loop element is about 2.5 meters of copper foil shaped into a diamond. Though signal levels were lower than normal, the antenna did work reasonably well indoors for SWBC listening, and I could hear a few hams on 40m as well. I noticed no IMD, probably because the concrete building kept signal levels low enough to avoid problems.

10267. Re: [loopantennas] saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 20:00:03 UTC
From: Harold
Topic: 10264 Message: 10267

Chuck,
I'm not sure what a saturn loop is.

But in 1962, I was in Elimra, NY and at the club we made horizontal loops for everyone. there were three loops stacked on top of each other and was approx 2 feet in Dia, we used it mobil and for fixed station...

really worked well. wish I had it today, but someone thought they should have it and it went missing.

I don't know if anyone else has a plan etc for that mobil hallo or not.
I'd be interested if someone does have plans.
I haven't seen any, but still looking.

I hope you enjoy your 6M loop as much as I did.

Blessings and 73's

Hal AA2ID

-----Original Message-----
From: chuckunis <chuckunis@...m>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Mon, Nov 4, 2013 11:52 pm
Subject: [loopantennas] saturn 6m halo loop

I have recently come across what appears to be a Saturn Halo 6M loop or a very well done copy. Does anybody know what kind of performance I can expect from this type of antenna?

Chuck
VA3RDR

10268. Re: [loopantennas] saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 21:06:06 UTC
From: Van Lincoln WD8AAM
Topic: 10264 Message: 10268

Here's a good link to a halo 6 meter antenna
Van wd8aam

http://www.eham.net/articles/27225?ehamsid=ge5tnf1gsakodim7bt9smaaii4

At 20:00 11/5/2013, you wrote:

>Chuck,
>I'm not sure what a saturn loop is.
>But in 1962, I was in Elimra, NY and at the club we made horizontal
>loops for everyone. there were three loops stacked on top of each
>other and was approx 2 feet in Dia, we used it mobil and for fixed station...
>really worked well. wish I had it today, but someone thought they
>should have it and it went missing.
>
>I don't know if anyone else has a plan etc for that mobil hallo or not.
>I'd be interested if someone does have plans.
>I haven't seen any, but still looking.
>
>I hope you enjoy your 6M loop as much as I did.
>
>Blessings and 73's
>
>Hal AA2ID
>
>
>-----Original Message-----
>From: chuckunis <chuckunis@...>
>To: loopantennas <loopantennas@yahoogroups.com>
>Sent: Mon, Nov 4, 2013 11:52 pm
>Subject: [loopantennas] saturn 6m halo loop
>
>
>I have recently come across what appears to be a Saturn Halo 6M loop
>or a very well done copy. Does anybody know what kind of performance
>I can expect from this type of antenna?
>
>Chuck
>VA3RDR
>
>
>

10269. RE: [loopantennas] saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 22:14:50 UTC
From: Jim Best
Topic: 10264 Message: 10269

I ran one of these mobile in 1968 using a Lafayette HA-460 a.m. transceiver.

Worked fine whenever I could find someone on 6 meters. There wasn't to much

SSB or FM in my part of the country then. Great antenna. I wish I still
had it.

Jim WU7G

Here's a good link to a halo 6 meter antenna
Van wd8aam

http://www.eham.net/articles/27225?ehamsid=ge5tnf1gsakodim7bt9smaaii4

At 20:00 11/5/2013, you wrote:

Chuck,
I'm not sure what a saturn loop is.
But in 1962, I was in Elimra, NY and at the club we made horizontal loops
for everyone. there were three loops stacked on top of each other and was
approx 2 feet in Dia, we used it mobil and for fixed station...
really worked well. wish I had it today, but someone thought they should
have it and it went missing.

I don't know if anyone else has a plan etc for that mobil hallo or not.
I'd be interested if someone does have plans.
I haven't seen any, but still looking.

I hope you enjoy your 6M loop as much as I did.

Blessings and 73's

Hal AA2ID

-----Original Message-----
From: chuckunis <chuckunis@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Mon, Nov 4, 2013 11:52 pm
Subject: [loopantennas] saturn 6m halo loop

I have recently come across what appears to be a Saturn Halo 6M loop or a
very well done copy. Does anybody know what kind of performance I can expect
from this type of antenna?

Chuck
VA3RDR

10270. Re: [loopantennas] saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 23:23:47 UTC
From: chuck howell
Topic: 10264 Message: 10270

That sounds like the antenna I found

Chuck
VA3RDR

On Tuesday, November 5, 2013 5:11 PM, Jim Best <james9194@...> wrote:

I ran one of these mobile in 1968 using a Lafayette HA-460 a.m. transceiver.
Worked fine whenever I could find someone on 6 meters. There wasn't to much
SSB or FM in my part of the country then. Great antenna. I wish I still had it.

Jim WU7G

Here's a good link to a halo 6 meter antenna
Van wd8aam

http://www.eham.net/articles/27225?ehamsid=ge5tnf1gsakodim7bt9smaaii4

At 20:00 11/5/2013, you wrote:

Chuck,
>I'm not sure what a saturn loop is.
>But in 1962, I was in Elimra, NY and at the club we made horizontal loops for everyone.
there were three loops stacked on top of each other and was approx 2 feet in Dia, we used
it mobil and for fixed station...
>really worked well. wish I had it today, but someone thought they should have it and it
went missing.
>
>I don't know if anyone else has a plan etc for that mobil hallo or not.
>I'd be interested if someone does have plans.
>I haven't seen any, but still looking.
>
>I hope you enjoy your 6M loop as much as I did.
>
>Blessings and 73's
>
>Hal AA2ID
>
>
>-----Original Message-----
>From: chuckunis <chuckunis@...>
>To: loopantennas <loopantennas@yahoogroups.com>
>Sent: Mon, Nov 4, 2013 11:52 pm
>Subject: [loopantennas] saturn 6m halo loop
>
>
>I have recently come across what appears to be a Saturn Halo 6M loop or a very well done

copy. Does anybody know what kind of performance I can expect from this type of antenna?
>
>Chuck
>VA3RDR
>
>

10271. Re: [loopantennas] 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-05 11:25:53 UTC
From: K2TL
Topic: 10263 Message: 10271
Attachments: 1 described; binary payloads are missing from this source WARC

Even if you could, the current drain between the amp and the receiver would kill 2 AAA batteries real fast. The gain of the amp would be reduced to almost nothing with 1.5 volts anyway.
I use the same amp almost everyday, but I supply it with 13.5 volts via the feedline .
K2TL

> qrp.gaijin@... <mailto:qrp.gaijin@...>
> Monday, November 04, 2013 10:32 PM
>
> Greetings list members,
>
>
> I have built the M0AYF active broadband loop antenna described at the
> link below. It works well (I use 2N3904 transistors).
>
> http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html
>
> I am wondering if it is possible to run this antenna off of very low
> voltage, 1.5 to 3 volts. What would be the recommended changes to the
> circuit, and what would be the likely impact on performance?
>
> The reason for wanting to run it off of low voltage is that I want to
> incorporate this antenna as part of a low-voltage homebrew transistor
> shortwave receiver. The receiver itself runs off of 2 AAA rechargeable
> batteries. It would be nice if I could run the antenna off of the same
> power source.
>
> Any comments appreciated.
>

10272. Re: Sheilded loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-06 02:46:05 UTC
From: colin
Topic: 10257 Message: 10272

Thank you Chris.

Your mobius strip shielded loop design is very extensive!

I have aquired a 32' run of 1" diameter semi-rigid 50 ohm coaxial cable.
Do you think it would be suitable shielded design?
I am aware that having a relatively large inherent capacitance will limit it's upper frequency limit.

Regards
Colin
ZL1BTT

--- In loopantennas@yahoogroups.com, Chris Trask <christrask@...> wrote:
>
> >
> >Hi,
> >
> >I am new to this group and looking for a design for a shielded loop.
> >
>
> Look in the group files section for my paper titled "Shielded Loop Aerials Rev 0.pdf".
>
> Chris
>

10273. RE: Re: [loopantennas] 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-06 13:00:44 UTC
From: Chris Trask
Topic: 10263 Message: 10273

-----Original Message-----
>From: qrp.gaijin@...
>Sent: Nov 5, 2013 9:34 AM
>To: loopantennas@yahoogroups.com
>Subject: RE: Re: [loopantennas] 1.5-volt active loop antenna?
>
>---In loopantennas@yahoogroups.com, <christrask@...> wrote:
>> I have a schematic in mind if you're interested.
>
>
>
>
>
> Thanks for the suggestions. Yes, I would be interested in any further schematic details you might provide,
>even if only tentative.
>

I just added the file "Active Loop Amplifier for 1p5V Operation.pdf" to the group files section. I should point out that for loop antennas the input impedance of the amplifier should be very low, so I will later add a schematic for a more suitable design later.

>
> As an experiment I tried running the antenna off of about 2.4 volts, with no circuit changes. The loop
>element is about 2.5 meters of copper foil shaped into a diamond. Though signal levels were lower than
>normal, the antenna did work reasonably well indoors for SWBC listening, and I could hear a few hams on
>40m as well. I noticed no IMD, probably because the concrete building kept signal levels low enough to
>avoid problems.
>

Good IMD performance at low voltages will be tricky. You'll notice in the schematic that the biasing is accomplished by way of current mirrors so as to maximise the emitter-collector voltage.

Chris

10274. Re: [loopantennas] 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-06 13:09:40 UTC
From: Chris Trask
Topic: 10263 Message: 10274

>
>Even if you could, the current drain between the amp and the receiver
>would kill 2 AAA batteries real fast. The gain of the amp would be
>reduced to almost nothing with 1.5 volts anyway.
>

You don't want to run low-voltage amplifiers at high currents as the saturation voltage rises with current, and you soon find yourself with a limited dynamic range. Take a look at the curve family photos in my paper on transistor selection at:

http://www.home.earthlink.net/~christrask/Bipolar%20Transistor%20Evaluation.pdf

Chris

10275. Re: [loopantennas] Re: Sheilded loop design

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-06 13:11:57 UTC
From: Chris Trask
Topic: 10257 Message: 10275

>
>Thank you Chris.
>
>Your mobius strip shielded loop design is very extensive!
>
>I have aquired a 32' run of 1" diameter semi-rigid 50 ohm coaxial cable.
>Do you think it would be suitable shielded design?
>I am aware that having a relatively large inherent capacitance will limit it's upper frequency limit.
>

That would be terrific material for making a MW to 49m shielded loop.

Chris

10276. Re: [loopantennas] saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-06 13:43:00 UTC
From: Harold
Topic: 10264 Message: 10276

Yes, that is the one I used to have.
thanks for posting.

Hal

AA2ID

-----Original Message-----
From: chuck howell <chuckunis@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Tue, Nov 5, 2013 6:23 pm
Subject: Re: [loopantennas] saturn 6m halo loop

That sounds like the antenna I found

Chuck
VA3RDR

On Tuesday, November 5, 2013 5:11 PM, Jim Best <james9194@...> wrote:

I ran one of these mobile in 1968 using a Lafayette HA-460 a.m. transceiver.
Worked fine whenever I could find someone on 6 meters. There wasn’t to much
SSB or FM in my part of the country then. Great antenna. I wish I still had it.

Jim WU7G

Here's a good link to a halo 6 meter antenna
Van wd8aam

http://www.eham.net/articles/27225?ehamsid=ge5tnf1gsakodim7bt9smaaii4

At 20:00 11/5/2013, you wrote:

Chuck,
I'm not sure what a saturn loop is.
But in 1962, I was in Elimra, NY and at the club we made horizontal loops for everyone.
there were three loops stacked on top of each other and was approx 2 feet in Dia, we used
it mobil and for fixed station...
really worked well. wish I had it today, but someone thought they should have it and it
went missing.

I don't know if anyone else has a plan etc for that mobil hallo or not.
I'd be interested if someone does have plans.
I haven't seen any, but still looking.

I hope you enjoy your 6M loop as much as I did.

Blessings and 73's

Hal AA2ID

-----Original Message-----
From: chuckunis <chuckunis@yahoo.com>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Mon, Nov 4, 2013 11:52 pm
Subject: [loopantennas] saturn 6m halo loop

I have recently come across what appears to be a Saturn Halo 6M loop or a very well done copy. Does anybody know what kind of performance I can expect from this type of antenna?

Chuck
VA3RDR

10277. Re: [loopantennas] saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-06 13:47:23 UTC
From: Harold
Topic: 10264 Message: 10277

Jim, I ran mine with a Heathkit Lunch box 6 Meter AM.
as i recall. everyone had one and there was a lot of activity in our area.

Of course that was 6 years eariler..

I really treasure those days...

Hal AA2ID

-----Original Message-----
From: Jim Best <james9194@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Tue, Nov 5, 2013 5:11 pm
Subject: RE: [loopantennas] saturn 6m halo loop

I ran one of these mobile in 1968 using a Lafayette HA-460 a.m. transceiver.
Worked fine whenever I could find someone on 6 meters. There wasn’t to much
SSB or FM in my part of the country then. Great antenna. I wish I still had it.

Jim WU7G

Here's a good link to a halo 6 meter antenna
Van wd8aam

http://www.eham.net/articles/27225?ehamsid=ge5tnf1gsakodim7bt9smaaii4

At 20:00 11/5/2013, you wrote:

Chuck,
I'm not sure what a saturn loop is.
But in 1962, I was in Elimra, NY and at the club we made horizontal loops for everyone.
there were three loops stacked on top of each other and was approx 2 feet in Dia, we used
it mobil and for fixed station...
really worked well. wish I had it today, but someone thought they should have it and it
went missing.

I don't know if anyone else has a plan etc for that mobil hallo or not.
I'd be interested if someone does have plans.
I haven't seen any, but still looking.

I hope you enjoy your 6M loop as much as I did.

Blessings and 73's

Hal AA2ID

-----Original Message-----
From: chuckunis <chuckunis@...>
To: loopantennas <loopantennas@yahoogroups.com>

Sent: Mon, Nov 4, 2013 11:52 pm
Subject: [loopantennas] saturn 6m halo loop

I have recently come across what appears to be a Saturn Halo 6M loop or a very well done copy. Does anybody know what kind of performance I can expect fr om this type of antenna?

Chuck
VA3RDR

10278. Re: saturn 6m halo loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-06 13:49:04 UTC
From: Craig Smith
Topic: 10264 Message: 10278

Fond memories of the Saturn 6 here. It was the "go to" 6 meter mobile antenna in the midwest back around 1961 when I was first licensed. Proudly had one on the back bumper of my 1950 Chevy coupe. Rig was a Heathkit Sixer.

As I recall, it was basically an end loaded dipole with appropriate matching. Once you had the little tuning plate between the ends adjusted just right, it worked quite well.

73 Craig AC0DS

10279. RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-07 01:24:35 UTC
From: <qrp.gaijin@...>
Topic: 10263 Message: 10279

---In loopantennas@yahoogroups.com, <christrask@...> wrote:

> I just added the file "Active Loop Amplifier for 1p5V Operation.pdf" to the group files section.

Thanks for the ideas. A couple of questions, if I may:

1. The emitter resistance has been replaced with an inductance. Will its reactance variation with frequency affect the wideband nature of the loop? A similar question apples to T1, which seems to replace the original base bias resistors going to ground (R6 and R7 in the original M0AYF schematic).

2. How should the values for R1, T1, L1 be computed?

It will be interesting to build the new circuit and see how it compares to the original amplifier circuit (run off of both high voltage and low voltage). As I mentioned, with the original circuit, 2.4V was, somewhat surprisingly, enough to deliver audible reception of ham and SWBC signals with the antenna indoors; 1.2V operation was, however, impossible and yielded no audible stations.

> I should point out that for loop antennas the input impedance of the amplifier should be very low, so I will later add a schematic for a more suitable design later.

I look forward to seeing this design when it is ready. Differential pairs are still a bit of a mystery for me, but I'm learning that they have a lot of uses in low-voltage applications: as oscillators, regenerative detectors, or, as we see here, loop antenna amplifiers.

10280. Re: [loopantennas] RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-07 02:09:57 UTC
From: Chris Trask
Topic: 10263 Message: 10280

```
>
>---In loopantennas@yahoogroups.com, <christrask@...> wrote:
>
>
> > I just added the file "Active Loop Amplifier for 1p5V Operation.pdf" to
> > the group files section.
>
>
> Thanks for the ideas. A couple of questions, if I may:
>
>
> 1. The emitter resistance has been replaced with an inductance. Will its
> reactance variation with frequency affect the wideband nature of the loop?
>

The purpose of the inductance is to retain the differential nature of the amplifier. At low
frequencies, the amplifier will become a pair of common-emitter amplifiers. The
differential amplifier provides immunity from common-môde distortion.

>
> A similar question apples to T1, which seems to replace the original base
> bias resistors going to ground (R6 and R7 in the original M0AYF schematic).
>

Transformer T1 acts as a biasing choke, and it provides immunity from common-môde
interference, such as from strong nearby broadcast signals.

>
> 2. How should the values for R1, T1, L1 be computed?
>

The values for T1 and L1 will depend on the lowest frequency of interest. The value for R1
is chosen so as to provide the best IMD performance.

>
> It will be interesting to build the new circuit and see how it compares to
> the original amplifier circuit (run off of both high voltage and low voltage).
> As I mentioned, with the original circuit, 2.4V was, somewhat surprisingly,
> enough to deliver audible reception of ham and SWBC signals with the antenna
> indoors; 1.2V operation was, however, impossible and yielded no audible stations.
>
>
> > I should point out that for loop antennas the input impedance of the amplifier
> > should be very low, so I will later add a schematic for a more suitable design
> > later.
>
```

>
>
> I look forward to seeing this design when it is ready. Differential pairs are
> still a bit of a mystery for me, but I'm learning that they have a lot of uses
> in low-voltage applications: as oscillators, regenerative detectors, or, as we
> see here, loop antenna amplifiers.
>

Chris

10281. RE: RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-07 12:40:10 UTC
From: <jimk2tl@...>
Topic: 10263 Message: 10281

I would sure like to see values for the components of this circuit,,maybe for about 400khz at the low end up through at least 4 Mhz .
Thanks!
Jim

---In loopantennas@yahoogroups.com, <qrp.gaijin@...> wrote:

---In loopantennas@yahoogroups.com, <christrask@...> wrote:

> I just added the file "Active Loop Amplifier for 1p5V Operation.pdf" to the group files section.

Thanks for the ideas. A couple of questions, if I may:

1. The emitter resistance has been replaced with an inductance. Will its reactance variation with frequency affect the wideband nature of the loop? A similar question apples to T1, which seems to replace the original base bias resistors going to ground (R6 and R7 in the original M0AYF schematic).

2. How should the values for R1, T1, L1 be computed?

It will be interesting to build the new circuit and see how it compares to the original amplifier circuit (run off of both high voltage and low voltage). As I mentioned, with the original circuit, 2.4V was, somewhat surprisingly, enough to deliver audible reception of ham and SWBC signals with the antenna indoors; 1.2V operation was, however, impossible and yielded no audible stations.

> I should point out that for loop antennas the input impedance of the amplifier should be very low, so I will later add a schematic for a more suitable design later.

I look forward to seeing this design when it is ready. Differential pairs are still a bit of a mystery for me, but I'm learning that they have a lot of uses in low-voltage applications: as oscillators, regenerative detectors, or, as we see here, loop antenna amplifiers.

10282. Re: [loopantennas] RE: RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-07 14:29:57 UTC
From: Chris Trask
Topic: 10263 Message: 10282

>
>I would sure like to see values for the components of this circuit,,maybe for about 400khz at the low
>end up through at least 4 Mhz .
>

Let me work on that. I finished off the schematic for the low input impedance amplifier, so I'll incorporate that as well. It will use the HFA3046 NPN transistor array, which is a good device for low-voltage RF applications such as this.

Chris

10283. Re: [loopantennas] RE: RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-07 15:59:54 UTC
From: K2TL
Topic: 10263 Message: 10283
Attachments: 1 described; binary payloads are missing from this source WARC

Thank you! What kind of gain do you expect with this amp? And can it be used with a higher supply voltage?
Jim

> Chris Trask <mailto:christrask@...>
> Thursday, November 07, 2013 9:29 AM
>
> >
> >I would sure like to see values for the components of this
> circuit,,maybe for about 400khz at the low
> >end up through at least 4 Mhz .
> >
>
> Let me work on that. I finished off the schematic for the low input
> impedance amplifier, so I'll incorporate that as well. It will use the
> HFA3046 NPN transistor array, which is a good device for low-voltage
> RF applications such as this.
>
> Chris
>
>

10284. Re: [loopantennas] RE: RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-07 16:23:29 UTC
From: Chris Trask
Topic: 10263 Message: 10284

```
>
>>
>>>
>>>I would sure like to see values for the components of this
>>>circuit,,maybe for about 400khz at the low
>>>end up through at least 4 Mhz .
>>>
>>
>> Let me work on that. I finished off the schematic for the low input
>> impedance amplifier, so I'll incorporate that as well. It will use the
>> HFA3046 NPN transistor array, which is a good device for low-voltage
>> RF applications such as this.
>>
>
>Thank you! What kind of gain do you expect with this amp? And can it
>be used with a higher supply voltage?
>
>
```

I just deleted that earlier PDF file and replaced it with "Active Antenna Amplifiers for Low Voltage Operation.pdf" that has the low input impedance amplifier on the second page. This is still a work in progress.

Not certain what sort of gain to expect with either of these. The maximum supply voltage will depend on the collector-emitter breakdown voltage of the devices. For the low impedance amplifier using the HFA3046, the maximum supply voltage would be 5.0V.

Chris

10285. Re: [loopantennas] Alex Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-07 22:34:57 UTC
From: Stephen Ponder
Topic: 10248 Message: 10285

Hi Bob,

There is an article in the November issue of ARRL's QST magazine about the Walkham version of the Alex Loop. The reviewer gave it pretty good marks. Said it's available from GigaParts and another vendor (I can't remember the name).

The GigaParts page is here ...

http://www.gigaparts.com/Product-Lines/HF-Portable-Antennas/PH1AHD-AlexLoop-Walkham.html

At $369.00, it's pretty pricey, IMHO.

73,

Steve N5WBI

Sent from Yahoo! Mail for Windows 8

From: Robert R<kb9iva@...>
Sent: □Fri, □Oct□ □25□, □2013 at □12□:□47□ □AM
To: <loopantennas@yahoogroups.com>
Subject: [loopantennas] Alex Loop

HI iam looking for a Alex Loop or home Brew Alex Loop, Contact me
here or at kb9iva@...
72/73's
Bob Kb9iva

```
.css-sandbox #ygrp-mkp {
border:1px solid #d8d8d8;
font-family:Arial;
margin:10px 0;
padding:0 10px;
}

.css-sandbox #ygrp-mkp hr {
border:1px solid #d8d8d8;
}

.css-sandbox #ygrp-mkp #hd {
color:#628c2a;
font-size:85%;
font-weight:700;
line-height:122%;
margin:10px 0;
}
```

```
.css-sandbox #ygrp-mkp #ads {
margin-bottom:10px;
}

.css-sandbox #ygrp-mkp .ad {
padding:0 0;
}

.css-sandbox #ygrp-mkp .ad p {
margin:0;
}

.css-sandbox #ygrp-mkp .ad a {
color:#0000ff;
text-decoration:none;
}

.css-sandbox #ygrp-sponsor #ygrp-lc {
font-family:Arial;
}

.css-sandbox #ygrp-sponsor #ygrp-lc #hd {
margin:10px 0px;
font-weight:700;
font-size:78%;
line-height:122%;
}

.css-sandbox #ygrp-sponsor #ygrp-lc .ad {
margin-bottom:10px;
padding:0 0;
}

.css-sandbox #actions {
font-family:Verdana;
font-size:11px;
padding:10px 0;
}

.css-sandbox #activity {
background-color:#e0ecee;
float:left;
font-family:Verdana;
font-size:10px;
padding:10px;
}

.css-sandbox #activity span {
font-weight:700;
}

.css-sandbox #activity span:first-child {
text-transform:uppercase;
}
```

```
.css-sandbox #activity span a {
color:#5085b6;
text-decoration:none;
}

.css-sandbox #activity span span {
color:#ff7900;
}

.css-sandbox #activity span .underline {
text-decoration:underline;
}

.css-sandbox .attach {
clear:both;
display:table;
font-family:Arial;
font-size:12px;
padding:10px 0;
width:400px;
}

.css-sandbox .attach div a {
text-decoration:none;
}

.css-sandbox .attach img {
border:none;
padding-right:5px;
}

.css-sandbox .attach label {
display:block;
margin-bottom:5px;
}

.css-sandbox .attach label a {
text-decoration:none;
}

.css-sandbox blockquote {
margin:0 0 0 4px;
}

.css-sandbox .bold {
font-family:Arial;
font-size:13px;
font-weight:700;
}

.css-sandbox .bold a {
text-decoration:none;
}
```

```
.css-sandbox dd.last p a {
font-family:Verdana;
font-weight:700;
}

.css-sandbox dd.last p span {
margin-right:10px;
font-family:Verdana;
font-weight:700;
}

.css-sandbox dd.last p span.yshortcuts {
margin-right:0;
}

.css-sandbox div.attach-table div div a {
text-decoration:none;
}

.css-sandbox div.attach-table {
width:400px;
}

.css-sandbox div.file-title a, .css-sandbox div.file-title a:hover {
text-decoration:none;
}

.css-sandbox div.photo-title a, .css-sandbox div.photo-title a:hover {
text-decoration:none;
}

.css-sandbox div#ygrp-mlmsg #ygrp-msg p a span.yshortcuts {
font-family:Verdana;
font-size:10px;
font-weight:normal;
}

.css-sandbox .green {
color:#628c2a;
}

.css-sandbox .MsoNormal {
margin:0 0 0 0;
}

.css-sandbox #photos div {
float:left;
width:72px;
}

.css-sandbox #photos div div {
border:1px solid #666666;
height:62px;
overflow:hidden;
```

```
width:62px;
}

.css-sandbox #photos div label {
color:#666666;
font-size:10px;
overflow:hidden;
text-align:center;
white-space:nowrap;
width:64px;
}

.css-sandbox #reco-category {
font-size:77%;
}

.css-sandbox #reco-desc {
font-size:77%;
}

.css-sandbox .replbq {
margin:4px;
}

.css-sandbox #ygrp-actbar div a:first-child {
margin-right:2px;
padding-right:5px;
}

.css-sandbox #ygrp-mlmsg {
font-size:13px;
font-family:Arial, helvetica, clean, sans-serif;
}

.css-sandbox #ygrp-mlmsg table {
font-size:inherit;
font:100%;
}

.css-sandbox #ygrp-mlmsg select, .css-sandbox input, .css-sandbox textarea {
font:99% Arial, Helvetica, clean, sans-serif;
}

.css-sandbox #ygrp-mlmsg pre, .css-sandbox code {
font:115% monospace;
}

.css-sandbox #ygrp-mlmsg * {
line-height:1.22em;
}

.css-sandbox #ygrp-mlmsg #logo {
padding-bottom:10px;
```

```
}

.css-sandbox #ygrp-msg p a {
font-family:Verdana;
}

.css-sandbox #ygrp-msg p#attach-count span {
color:#1E66AE;
font-weight:700;
}

.css-sandbox #ygrp-reco #reco-head {
color:#ff7900;
font-weight:700;
}

.css-sandbox #ygrp-reco {
margin-bottom:20px;
padding:0px;
}

.css-sandbox #ygrp-sponsor #ov li a {
font-size:130%;
text-decoration:none;
}

.css-sandbox #ygrp-sponsor #ov li {
font-size:77%;
list-style-type:square;
padding:6px 0;
}

.css-sandbox #ygrp-sponsor #ov ul {
margin:0;
padding:0 0 0 8px;
}

.css-sandbox #ygrp-text {
font-family:Georgia;
}

.css-sandbox #ygrp-text p {
margin:0 0 1em 0;
}

.css-sandbox #ygrp-text tt {
font-size:120%;
}

.css-sandbox #ygrp-vital ul li:last-child {
border-right:none !important;
}
```

10286. Re: [loopantennas] Alex Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-08 01:11:01 UTC
From: dreagin@...
Topic: 10248 Message: 10286

Yes,pricey.Also,very well constructed,easily portable in it's carrying case,and very effective.I have worked lots of dx with it,including DXpeditions on Swains Is,Niue Is,and into Tasmania on 10w.Pricey yet a nice product for portable qrp ops.Other antennas are also pricey,but they do not work well.This one does...Dennis W7KB.

----- Original Message -----
From: Stephen Ponder <stephen_ponder@...>
To: loopantennas@yahoogroups.com
Sent: Thu, 07 Nov 2013 17:34:57 -0500 (EST)
Subject: Re: [loopantennas] Alex Loop

Hi Bob,

There is an article in the November issue of ARRL's QST magazine about the Walkham version of the Alex Loop. The reviewer gave it pretty good marks. Said it's available from GigaParts and another vendor (I can't remember the name).

The GigaParts page is here ...

http://www.gigaparts.com/Product-Lines/HF-Portable-Antennas/PH1AHD-AlexLoop-Walkham.html

At $369.00, it's pretty pricey, IMHO.

73,

Steve N5WBI

Sent from Yahoo! Mail for Windows 8

From:Robert Rkb9iva@...>
Sent:☐Fri, ☐Oct☐ ☐25☐, ☐2013 at ☐12☐:☐47☐ ☐AM
To:loopantennas@yahoogroups.com>
Subject:[loopantennas] Alex Loop

HI iam looking for a Alex Loop or home Brew Alex Loop, Contact me
here or at kb9iva@...
72/73's
Bob Kb9iva

10287. Re: [loopantennas] Alex Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-08 08:38:34 UTC
From: Rob
Topic: 10248 Message: 10287

Hi Guys,

Too bad that Gigaparts mistyped and uses now a Dutch (prefix) callsign as typenumber.This could give quite some confusion in the future.
73 Rob PE9PE

Stephen Ponder <stephen_ponder@sbcglobal.net> , 8-11-2013 0:20:

Hi Bob,

There is an article in the November issue of ARRL's QST magazine about the Walkham version of the Alex Loop. The reviewer gave it pretty good marks. Said it's available from GigaParts and another vendor (I can't remember the name).

The GigaParts page is here ...

http://www.gigaparts.com/Product-Lines/HF-Portable-Antennas/PH1AHD-AlexLoop-Walkham.html

At $369.00, it's pretty pricey, IMHO.

73,

Steve N5WBI

Sent from Yahoo! Mail for Windows 8

From: Robert Rkb9iva@...>
Sent: □Fri, □Oct□ □25□, □2013 at □12□:□47□ □AM
To: loopantennas@yahoogroups.com>
Subject: [loopantennas] Alex Loop

HI iam looking for a Alex Loop or home Brew Alex Loop, Contact me
here or at kb9iva@...
72/73's
Bob Kb9iva

10288. 2.5-25KV BUTTERFLY CAPACITOR KITS VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-09 01:06:33 UTC
From: <pop_vasile@...>
Topic: 10288 Message: 10288

2.5-25KV BUTTERFLY CAPACITOR KITS VA6POP

I can build for u any air variable capacitors kits

https://www.youtube.com/watch?v=thw0RLOh6zM
www.youtube.com/watch?v=fV-FWFQO6As

www.youtube.com/watch?v=dmZxgmalP9g

http://forums.qrz.com/showthread.php?351604-Butterfly-capacitor-kits-5-15kv

http://www.flickr.com/photos/93005502@N08/page3/

http://forums.qrz.com/showthread.php?378701-2-5-15kv-butterfly-capacitor-kits&p=\
2764980#post2764980

I have kits available for ham radio:

2.5" OD ROTOR
3" OD ROTOR
4" OD ROTOR
5" OD ROTOR
6" OD ROTOR
8" OD ROTOR
10" OD ROTOR

VA6POP
yo5bzz(at)gmail.com
Location: Calgary,CANADA

10289. Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-09 16:19:21 UTC
From: <jtegerdine@...>
Topic: 10289 Message: 10289

This is a 1-minute audio segment http://moondogastronomy.blogspot.com/2013/11/4703125-mhz.html, taken from a Uniden Bearcat hand-held scanner tuned to 470.3125 Mhz. It is part of a 2.5 hour period from 0800-1030 UTC on Nov. 9, 2013.
Included is my SpectrumLab plot as well as the Planetary K index for Nov. 9, 2013.
Can anyone tell me if this audio is a result of the aurora activity at that time? If not, what could I be picking up at that frequency? Thanks.

Jim Tegerdine
122W, 48N

10290. Re: Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 11:38:18 UTC
From: phil_m6mrp
Topic: 10289 Message: 10290

Hi Jim, it could well be due to the aurora as while Ive been laid up in the house due to medical problems I have been listening around on the FSR 446mhz band where my own low powered personal radio link is located and heard some amazing lifts with only a small indooor 1/4 wave ground plane antenna, I live in the heart of northern england in a place called Hexham in Northumberland down in a steep river valley with tree lined steep hillsides either side and to the rear of me and I have still heard mainland europe stations using 1/4 watt hand portable devices on 446 quite clearly and the build up (lift) sounded very similar to what you have, when you notice it again get down to the 70cm ham band or the 446 fsr segment and see what you can hear you may be supprised.
regards
Phil M6MRP/26CT867

--- In loopantennas@yahoogroups.com, <jtegerdine@...> wrote:
>
> This is a 1-minute audio segment
http://moondogastronomy.blogspot.com/2013/11/4703125-mhz.html, taken from a Uniden Bearcat hand-held scanner tuned to 470.3125 Mhz. It is part of a 2.5 hour period from 0800-1030 UTC on Nov. 9, 2013.
> Included is my SpectrumLab plot as well as the Planetary K index for Nov. 9, 2013.
> Can anyone tell me if this audio is a result of the aurora activity at that time? If not, what could I be picking up at that frequency? Thanks.
>
> Jim Tegerdine
> 122W, 48N
>

10291. Re: [loopantennas] Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 11:50:33 UTC
From: Rob
Topic: 10289 Message: 10291

Hi Jim and Phil,

I'm sorry to both disappoint you, but this has nothing to do with Aurora.
You are both confusing TROPO with Aurora.It's an often made mistake, but so what, we are here to learn isn't it?
Aurora has been only once or twice been recognised as lifting conditions on low UHF.It usually, say 99.9999% never reaches 200 Mhz or higher, let's even so high up on the 400MHz band.
Jim what you have recorded, imho, is a slow fading signal/carrier via tropo. It can be anything from a hanging relay in a repeater/transmitter to even manmade noise. From your recording it's simply impossible to know.
I hope this explanation helps.
Keep enjoying our beautiful radiohobby.
73
Rob van den Ent PE9PE

phil_m6mrp <dj_philonline@...> , 10-11-2013 12:37:

Hi Jim, it could well be due to the aurora as while Ive been laid up in the house due to medical problems I have been listening around on the FSR 446mhz band where my own low powered personal radio link is located and heard some amazing lifts with only a small indooor 1/4 wave ground plane antenna, I live in the heart of northern england in a place called Hexham in Northumberland down in a steep river valley with tree lined steep hillsides either side and to the rear of me and I have still heard mainland europe stations using 1/4 watt hand portable devices on 446 quite clearly and the build up (lift) sounded very similar to what you have, when you notice it again get down to the 70cm ham band or the 446 fsr segment and see what you can hear you may be supprised.
regards
Phil M6MRP/26CT867

--- In loopantennas@yahoogroups.com, <jtegerdine@...> wrote:
>
> This is a 1-minute audio segment
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> Included is my SpectrumLab plot as well as the Planetary K index for Nov. 9, 2013.
> Can anyone tell me if this audio is a result of the aurora activity at that time? If not, what could I be picking up at that frequency? Thanks.
>
> Jim Tegerdine
> 122W, 48N
>

10292. Re: [loopantennas] Re: Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 13:30:27 UTC
From: Jim Tegerdine
Topic: 10289 Message: 10292

Phil....
Thanks for the confirmation. Right now, (1330 utc) there seems to be some slight build up. I noticed on spaceweather.com that there is a 40% chance of aurora activity due to a solar wind sweep today (11/10).
I'll check the other frequencies.

Jim

On Sunday, November 10, 2013 3:38 AM, phil_m6mrp <dj_philonline@...> wrote:

Hi Jim, it could well be due to the aurora as while Ive been laid up in the house due to medical problems I have been listening around on the FSR 446mhz band where my own low powered personal radio link is located and heard some amazing lifts with only a small indooor 1/4 wave ground plane antenna, I live in the heart of northern england in a place called Hexham in Northumberland down in a steep river valley with tree lined steep hillsides either side and to the rear of me and I have still heard mainland europe stations using 1/4 watt hand portable devices on 446 quite clearly and the build up (lift) sounded very similar to what you have, when you notice it again get down to the 70cm ham band or the 446 fsr segment and see what you can hear you may be supprised.
regards
Phil M6MRP/26CT867

--- In loopantennas@yahoogroups.com, <jtegerdine@...> wrote:
>
> This is a 1-minute audio segment
http://moondogastronomy.blogspot.com/2013/11/4703125-mhz.html, taken from a Uniden Bearcat hand-held scanner tuned to 470.3125 Mhz. It is part of a 2.5 hour period from 0800-1030 UTC on Nov. 9, 2013.
> Included is my SpectrumLab plot as well as the Planetary K index for Nov. 9, 2013.
> Can anyone tell me if this audio is a result of the aurora activity at that time? If not, what could I be picking up at that frequency? Thanks.
>
> Jim Tegerdine
> 122W, 48N
>

10293. Re: 2.5-25KV BUTTERFLY CAPACITOR KITS VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 14:37:45 UTC
From: rchetley
Topic: 10288 Message: 10293

Can you send and include a price list and projected or the likely values for these capacitors ie 6 inch Cap is $45 and gives 5 pf -500pf ? That would be most helpful.

--- In loopantennas@yahoogroups.com, <pop_vasile@...> wrote:
>
> 2.5-25KV BUTTERFLY CAPACITOR KITS VA6POP
>
>
> I can build for u any air variable capacitors kits
>
> https://www.youtube.com/watch?v=thw0RLOh6zM
> www.youtube.com/watch?v=fV-FWFQO6As
>
> www.youtube.com/watch?v=dmZxgmalP9g
>
> http://forums.qrz.com/showthread.php?351604-Butterfly-capacitor-kits-5-15kv
>
> http://www.flickr.com/photos/93005502@N08/page3/
>
>
> http://forums.qrz.com/showthread.php?378701-2-5-15kv-butterfly-capacitor-kits&p=\
> 2764980#post2764980
>
>
> I have kits available for ham radio:
>
>
> 2.5" OD ROTOR
> 3" OD ROTOR
> 4" OD ROTOR
> 5" OD ROTOR
> 6" OD ROTOR
> 8" OD ROTOR
> 10" OD ROTOR
>
>
> VA6POP
> yo5bzz(at)gmail.com
> Location: Calgary,CANADA
>

10294. How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 21:04:17 UTC
From: <halhub@...>
Topic: 10294 Message: 10294

Not being an EE and new to ham radio.. where to I need to connect to on the item being sold on ebay... ? I have one of those capacitors.
http://www.ebay.com/itm/ws/eBayISAPI.dll?ViewItem&item=330908518422&item=330908518422&lgeo=1&vectorid=229466 http://www.ebay.com/itm/ws/eBayISAPI.dll?ViewItem&item=330908518422&item=330908518422&lgeo=1&vectorid=229466

10295. Re: [loopantennas] Re: Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 22:05:43 UTC
From: phil blast
Topic: 10289 Message: 10295

It has got so bad lately that myself and a few others who run radio gateways on 446 linked to the internet have had to either switch to tone squelch opperation (like I have done) or have the squelch on the gateway radio set up to nearly max to stop them switching to tx due to the static lift, I reviewed your recording and it does not sound like any of the usual man made interferance we hear on the bands from flouresant lights, pump motors, generators, PLTs or thermostats so more than likely solar or aurora.
Do you live near any military or naval bases that do testing or radar? it could also be that as the MOD are sometimes active around those frequencies.
Hope you pin it down

Phil

On Sunday, 10 November 2013, 14:21, Jim Tegerdine <jtegerdine@...> wrote:

Phil....
Thanks for the confirmation. Right now, (1330 utc) there seems to be some slight build up. I noticed on spaceweather.com that there is a 40% chance of aurora activity due to a solar wind sweep today (11/10).
I'll check the other frequencies.

Jim

On Sunday, November 10, 2013 3:38 AM, phil_m6mrp <dj_philonline@...> wrote:

Hi Jim, it could well be due to the aurora as while Ive been laid up in the house due to medical problems I have been listening around on the FSR 446mhz band where my own low powered personal radio link is located and heard some amazing lifts with only a small indooor 1/4 wave ground plane antenna, I live in the heart of northern england in a place called Hexham in Northumberland down in a steep river valley with tree lined steep hillsides either side and to the rear of me and I have still heard mainland europe stations using 1/4 watt hand portable devices on 446 quite clearly and the build up (lift) sounded very similar to what you have, when you notice it again get down to the 70cm ham band or the 446 fsr segment and see what you can hear you may be supprised.
regards
Phil M6MRP/26CT867

--- In loopantennas@yahoogroups.com, <jtegerdine@...> wrote:
>
> This is a 1-minute audio segment
http://moondogastronomy.blogspot.com/2013/11/4703125-mhz.html, taken from a Uniden Bearcat hand-held scanner tuned to 470.3125 Mhz. It is part of a 2.5 hour period from 0800-1030 UTC on Nov. 9, 2013.
> Included is my SpectrumLab plot as well as the Planetary K index for Nov. 9, 2013.
> Can anyone tell me if this audio is a result of the aurora activity at that time? If not, what could I be picking up at that frequency? Thanks.
>
> Jim Tegerdine

> 122W, 48N
>

10296. Re: [loopantennas] Re: Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 23:21:10 UTC
From: Jim Tegerdine
Topic: 10289 Message: 10296

I live close to the Jim Creek Naval VLF station. But I don't think that would cause any interference.
I also monitor VLF for SID (Sudden Ionospheric Disturbance) and Jim Creek (NLK) generates a very strong ground wave on my receiver. I am about 12 miles SW of the station!

On Sunday, November 10, 2013 2:05 PM, phil blast <dj_philonline@...> wrote:

It has got so bad lately that myself and a few others who run radio gateways on 446 linked to the internet have had to either switch to tone squelch opperation (like I have done) or have the squelch on the gateway radio set up to nearly max to stop them switching to tx due to the static lift, I reviewed your recording and it does not sound like any of the usual man made interferance we hear on the bands from flouresant lights, pump motors, generators, PLTs or thermostats so more than likely solar or aurora.
Do you live near any military or naval bases that do testing or radar? it could also be that as the MOD are sometimes active around those frequencies.
Hope you pin it down

Phil

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Thanks for the confirmation. Right now, (1330 utc) there seems to be some slight build up. I noticed on spaceweather.com that there is a 40% chance of aurora activity due to a solar wind sweep today (11/10).
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> Jim Tegerdine
> 122W, 48N
>

10297. RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-10 23:27:19 UTC
From: <bob71741@...>
Topic: 10294 Message: 10297

You are probably going to need more than where to connect as there are three variable capacitors on that honker. There are solder terminals on the top of that that image over each bank;again, for your application you will need to know which banks to hook up.

---In loopantennas@yahoogroups.com, <halhub@...> wrote:

Not being an EE and new to ham radio.. where to I need to connect to on the item being sold on ebay... ? I have one of those capacitors.
http://www.ebay.com/itm/ws/eBayISAPI.dll?ViewItem&item=330908518422&item=330908518422&lgeo=1&vectorid=229466 http://www.ebay.com/itm/ws/eBayISAPI.dll?ViewItem&item=330908518422&item=330908518422&lgeo=1&vectorid=229466

10298. RE: Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 00:39:17 UTC
From: <jtegerdine@...>
Topic: 10289 Message: 10298

Rob--
Can you steer me to more info on tropo?
These signal lifts seem to coincide with solar wind density, but I'm fascinated in learning more...
Jim

---In loopantennas@yahoogroups.com, <rob@...> wrote:

Hi Jim and Phil,

I'm sorry to both disappoint you, but this has nothing to do with Aurora.

You are both confusing TROPO with Aurora.
It's an often made mistake, but so what, we are here to learn isn't it?

Aurora has been only once or twice been recognised as lifting conditions on low UHF.
It usually, say 99.9999% never reaches 200 Mhz or higher, let's even so high up on the 400MHz band.

Jim what you have recorded, imho, is a slow fading signal/carrier via tropo.
It can be anything from a hanging relay in a repeater/transmitter to even manmade noise.
From your recording it's simply impossible to know.

I hope this explanation helps.

Keep enjoying our beautiful radiohobby.

73

Rob van den Ent
PE9PE

phil_m6mrp <dj_philonline@...> , 10-11-2013 12:37:
Hi Jim, it could well be due to the aurora as while Ive been laid up in the house due to medical problems I have been listening around on the FSR 446mhz band where my own low powered personal radio link is located and heard some amazing lifts with only a small indooor 1/4 wave ground plane antenna, I live in the heart of northern england in a place called Hexham in Northumberland down in a steep river valley with tree lined steep hillsides either side and to the rear of me and I have still heard mainland europe stations using 1/4 watt hand portable devices on 446 quite clearly and the build up (lift) sounded very similar to what you have, when you notice it again get down to the 70cm ham band or the 446 fsr segment and see what you can hear you may be supprised.
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>

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http://moondogastronomy.blogspot.com/2013/11/4703125-mhz.html, taken from a Uniden Bearcat hand-held scanner tuned to 470.3125 Mhz. It is part of a 2.5 hour period from 0800-1030 UTC on Nov. 9, 2013.
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>
> Jim Tegerdine
> 122W, 48N
>

10299. Re: [loopantennas] RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 00:47:38 UTC
From: Mike N9LSD
Topic: 10294 Message: 10299

That thing is waaay bigger than the 2 i have. Fyi- for any app. Over 800W. Youll need to use at least 16 ga. solid wire.

On Sun, Nov 10, 2013 6:27 PM EST bob71741@... wrote:

> You are probably going to need more than where to connect as there are three variable capacitors on that honker. There are solder terminals on the top of that that image over each bank;again, for your application you will need to know which banks to hook up.
>
>
>
>---In loopantennas@yahoogroups.com, <halhub@...> wrote:
>
> Not being an EE and new to ham radio.. where to I need to connect to on the item being sold on ebay... ? I have one of those capacitors.
> http://www.ebay.com/itm/ws/eBayISAPI.dll?ViewItem&item=330908518422&item=330908518422&lgeo=1&vectorid=229466 http://www.ebay.com/itm/ws/eBayISAPI.dll?ViewItem&item=330908518422&item=330908518422&lgeo=1&vectorid=229466
>
>

10300. Re: [loopantennas] RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 03:45:24 UTC
From: Andy
Topic: 10294 Message: 10300

... there are three variable capacitors on that honker.

Three? I count five.

You could parallel all of 'em. Or switch them in and out as needed.

Andy

10301. Re: [loopantennas] How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 04:15:40 UTC
From: John Kolb
Topic: 10294 Message: 10301

It depends on what you want to use the capacitor for.

The pictured capacitor has two sections used for tuning
the AM bcst band, probably 365 pF each, the sections
with many plates. There are three sections of capacitor
used for the FM band,more likely in the range of 30 pF each.
There is a tab above each capacitor section. The other side
of all the capacitor sections is the capacitor frame. The four
screws on the top of the cap are find adjustments for that section.

For use tuning a loop, this is only suitable for receiving antennas.
Moderate or high transmit power would create high voltage
across the capacitor plates and arc over.

For use as an HF or bcst band receiving loop, one of the lare
sections would be used, or possibly, both large sections in
parallel.

John
KK6IL

At 01:04 PM 11/10/2013, you wrote:

Not being an EE and new to ham radio.. where to I need to connect to on the item being sold on ebay... ? I have one of those capacitors.

http://www.ebay.com/itm/ws/eBayISAPI.dll?ViewItem&item=330908518422&item=330908518422&lgeo=1&vectorid=229466

10302. RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 03:03:46 UTC
From: <halhub@...>
Topic: 10294 Message: 10302

I am making an alex loop mag antenna. I have lots of 12 ga romex with I can split for the copper wire.

If I connect the 3 banks together of on each side and then connect them each to an so239 will that give me proper connections ?

Hal W4hal

---In loopantennas@yahoogroups.com, <m.bunner1@...> wrote:

That thing is waaay bigger than the 2 i have. Fyi- for any app. Over 800W. Youll need to use at least 16 ga. solid wire.

On Sun, Nov 10, 2013 6:27 PM EST bob71741@... mailto:bob71741@... wrote:

> You are probably going to need more than where to connect as there are three variable capacitors on that honker. There are solder terminals on the top of that that image over each bank;again, for your application you will need to know which banks to hook up.
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>
>

10303. Re: [loopantennas] How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 06:45:10 UTC
From: Mike N9LSD
Topic: 10294 Message: 10303

isnt the voltage capacity mostly dependent on plate spacing? For 2.5 KV I think youd need roughly .06" my 2 out of a Viking II are only .03" and that was a standard transmitter.

10304. Re: [loopantennas] Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 09:23:34 UTC
From: Rob
Topic: 10289 Message: 10304

Hi Jim,

I did find you a number of pages so you can study them at your own pace.
When you want to discuss these or anything else feel free to contact me off groupso we can go into detail.
1) http://en.wikipedia.org/wiki/Space_weather2) http://spaceweather.com/3) http://en.wikipedia.org/wiki/Tropospheric_scatter4) http://en.wikipedia.org/wiki/Troposphere5) http://www.dxinfocentre.com/tropo.html
The last page is very easy to use.It will predict, with very high accuracy, conditions.
I hope this info helps.
Best regards,
Rob PE9PE

jtegerdine@yahoo.com , 11-11-2013 1:38:

Rob--

Can you steer me to more info on tropo?

These signal lifts seem to coincide with solar wind density, but I'm fascinated in learning more...

Jim

---In loopantennas@yahoogroups.com, <rob@...> wrote:

Hi Jim and Phil,

I'm sorry to both disappoint you, but this has nothing to do with Aurora.
You are both confusing TROPO with Aurora.It's an often made mistake, but so what, we are here to learn isn't it?
Aurora has been only once or twice been recognised as lifting conditions on low UHF.It usually, say 99.9999% never reaches 200 Mhz or higher, let's even so high up on the 400MHz band.
Jim what you have recorded, imho, is a slow fading signal/carrier via tropo. I t can be anything from a hanging relay in a repeater/transmitter to even manmade noise. From your recording it's simply impossible to know.
I hope this explanation helps.
Keep enjoying our beautiful radiohobby.
73
Rob van den Ent PE9PE

phil_m6mrp <dj_philonline@...> , 10-11-2013 12:37:

Hi Jim, it could well be due to the aurora as while Ive been laid up in the house due to medical problems I have been listening around on the FSR 446mhz band where my own low powered personal radio link is located and heard some amazing lifts with only a small indooor 1/4 wave ground plane antenna, I live in the heart of northern england in a place

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regards
Phil M6MRP/26CT867

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> This is a 1-minute audio segment
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> Included is my SpectrumLab plot as well as the Planetary K index for Nov. 9, 2013.
> Can anyone tell me if this audio is a result of the aurora activity at that time? If not, what could I be picking up at that frequency? Thanks.
>
> Jim Tegerdine
> 122W, 48N
>

10305. Re: [loopantennas] RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 10:10:02 UTC
From: John Kolb
Topic: 10294 Message: 10305

The AlexLoop Walkham antenna is rated for 20 watts SSB max, and the photo of the Traveling Loop shows a variable capacitor with a plate spacing much wider than yours, so you will be very limited in transmitter power.

The KR1ST loop uses a 2 section capacitor both sections in series and with each section measuring 6-32 pF. So the small FM antenna sections would be suitable, not the larger AM sections. To wire 2 sections in series, connect one lead to one of the small plate sections and the other wire to another small plate section, and no connection to the frame. Note that putting two equal caps in series doubles the voltage at which arc over occurs, increasing max transmitting power.
http://www.kr1st.com/magloop.htm

John

At 07:03 PM 11/10/2013, you wrote:
I am making an alex loop mag antenna. I have lots of 12 ga romex with I can split for the copper wire.
If I connect the 3 banks together of on each side and then connect them each to an so239 will that give me proper connections ?

Hal W4hal

10306. Trans-Pacific Medium Wave Audio Clips - DXing with the ALA100M Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 17:52:08 UTC
From: thinkdx
Topic: 10306 Message: 10306

Other members of the Loop Antenna group might be interested to hear the audio of some of the medium wave stations I logged with a small (6-1/2 X 4 ft.) rectangular ALA100M Wellbrook loop.
Below is a link to a folder with 13 audio clips from the recent DX trip to Oregon's Rockworks #4
<https://maps.google.com/maps?q=oswald+west+state+park+oregon&hl=en&ll=45.743539,-123.958247&spn=0.005458,0.012392&sll=37.6,-95.665&sspn=49.7388\99,101.513672&t=h&z=17&layer=c&cbll=45.743584,-123.958367&panoid=n-NAZbU\E4n6GYGcgIshWdw&cbp=12,162.05,,0,0.37> cliff:
https://app.box.com/s/ 65z3ei2zz8sep46i37od
<https://app.box.com/s/65z3ei2zz8sep46i37od>
The folder also includes a text file of the complete loggings, and more description.
The range of power of the DX catches run from 10 kw JOQG Morioka / 20 kw JOHK Sendai, to 750/1500 kw HLCA Dangjin.
The ALA100M antenna was mounted above the roof of my SUV, and the receiver was a Perseus SDR with Jaguar software.
This was my first time DXing at the 400+ foot high Rockworks cliffs above the Pacific Ocean, but the signal enhancement was comparable to other times and places I've DXed from a cliff with rock wall to the east (Cape Perpetua area to the south of Newport, Oregon). The signal levels were very good considering the antenna size, but obviously aided by the fine ALA100M module that excels with smaller loops. When DXing at locations like this where I can't erect my usual choices of phased broadband loops or Beverage antennas, a higher gain small loop like the Wellbrook model can serve very well.
73,
Guy AtkinsPuyallup, WA USADXing from Rockworks Cliff #4,near Manzanitas, Oregon

10307. Re: [loopantennas] RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 23:34:50 UTC
From: Mike N9LSD
Topic: 10294 Message: 10307

re: KR1ST antenna real world feedback--- i just built this antenna last week. i saw an improvement of 4- 5 S-units signal strength (generally) and a great increase in readability. also some reduced noise level. i would enthusiastically recommend this design to anyone now using only an swl longwire. i know it works very well. Mike, N9LSD

On Mon, Nov 11, 2013 5:10 AM EST John Kolb wrote:

>
>The AlexLoop Walkham antenna is rated for 20 watts SSB max, and the photo
>of the Traveling Loop shows a variable capacitor with a plate spacing
>much wider than yours, so you will be very limited in transmitter power.
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>section measuring 6-32 pF. So the small FM antenna sections would be suitable,
>not the larger AM sections. To wire 2 sections in series, connect one lead to one
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>and no connection to the frame. Note that putting two equal caps in series
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>http://www.kr1st.com/magloop.htm
>
>John
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>At 07:03 PM 11/10/2013, you wrote:
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>If I connect the 3 banks together of on each side and then connect them each to an so239 will that give me proper connections ?
>
>Hal W4hal

10308. Re: [loopantennas] Re: Reception On 470.3125 Mhz

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-11 18:08:20 UTC
From: phil blast
Topic: 10289 Message: 10308

A good person to ask about this would be Iian M1OOO at the Sidmouth Observatory, he spends most his life tracking solar noise and once had myself and a few others chasing up and down the bands listening to simultanious noise patterns which sounded the same as your recording which he was also monitoring from the observatory, it was quite an interesting excersize, http://www.qrz.com/db/M1OOO, but as Rob says it could be anything realy but I have noticed the same coincadental lifts above 440mhz with voices and tones on the carrier.
Phil

On Sunday, 10 November 2013, 23:21, Jim Tegerdine <jtegerdine@...> wrote:

I live close to the Jim Creek Naval VLF station. But I don't think that would cause any interference.
I also monitor VLF for SID (Sudden Ionospheric Disturbance) and Jim Creek (NLK) generates a very strong ground wave on my receiver. I am about 12 miles SW of the station!

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> Jim Tegerdine
> 122W, 48N
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10309. RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-12 02:46:07 UTC
From: <halhub@...>
Topic: 10294 Message: 10309

If I am only using 5 watts from my kx3 why wouldn't I use all the plates ?

Hal w4hal

---In loopantennas@yahoogroups.com, <m.bunner1@...> wrote:

re: KR1ST antenna real world feedback--- i just built this antenna last week. i saw an improvement of 4- 5 S-units signal strength (generally) and a great increase in readability. also some reduced noise level. i would enthusiastically recommend this design to anyone now using only an swl longwire. i know it works very well. Mike, N9LSD

On Mon, Nov 11, 2013 5:10 AM EST John Kolb wrote:

>
>The AlexLoop Walkham antenna is rated for 20 watts SSB max, and the photo
>of the Traveling Loop shows a variable capacitor with a plate spacing
>much wider than yours, so you will be very limited in transmitter power.
>
>The KR1ST loop uses a 2 section capacitor both sections in series and with each
>section measuring 6-32 pF. So the small FM antenna sections would be suitable,
>not the larger AM sections. To wire 2 sections in series, connect one lead to one
>of the small plate sections and the other wire to another small plate section,
>and no connection to the frame. Note that putting two equal caps in series
>doubles the voltage at which arc over occurs, increasing max transmitting power.
>http://www.kr1st.com/magloop.htm http://www.kr1st.com/magloop.htm
>
>John
>
>At 07:03 PM 11/10/2013, you wrote:
>I am making an alex loop mag antenna. I have lots of 12 ga romex with I can split for the copper wire.
>If I connect the 3 banks together of on each side and then connect them each to an so239 will that give me proper connections ?
>
>Hal W4hal

10310. Re: [loopantennas] RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-14 13:36:41 UTC
From: Mike N9LSD
Topic: 10294 Message: 10310

The KR1ST antenna is receive only.

10311. RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-15 13:18:35 UTC
From: <pmooney22@...>
Topic: 10294 Message: 10311

"I'm a QRP operator and never use more than 5 Watts (SSB). With the antenna in the living room and at this power level I've been able to work Europe, Asiatic Russia, the Caribbean, South America, North America, and West Africa. I have been able to work over 80 countries with only 5 Watt SSB and this antenna."

from: http://www.kr1st.com/magloop.htm

KR1ST also has a receive loop at http://www.kr1st.com/swlloop.htm

Paul, 5B8BA

---In loopantennas@yahoogroups.com, <m.bunner1@...> wrote:

The KR1ST antenna is receive only.

10312. Part II - Antenna Tuner with two capacitors controlled by Arduino

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-15 21:15:13 UTC
From: <pu2clr@...>
Topic: 10312 Message: 10312

Hi All,

I have just posted the second video about my Antenna Tuner with two capacitors controlled by Android and Arduino.
It is still for QRP station.
Thanks to the Alexloop manufacturer idea and feedback, PY1AHD, It was possible to make some improvements on Android interface and Arduino program to make the system more use friendly.

The prototype was presented on Pacificon 2013 in Santa Clara, CA last month.

See this video on youtube e video here: http://www.youtube.com/watch?v=hfnlE1sbnEk&feature=c4-overview&list=UU5DmJR6AakJnYCRQop9Gphw

73,
PU2CLR,
Ricardo.

10313. Re: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-15 17:15:27 UTC
From: John Veitch
Topic: 10294 Message: 10313

There are two KR1ST loop designs. One for transceive and one for receive only.

http://www.kr1st.com/swlloop.htm

G4MRK

10314. RE: RE: How to wire capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-16 03:00:43 UTC
From: <halhub@...>
Topic: 10294 Message: 10314

My question is can I use all the plates on my capacitor ?

---In loopantennas@yahoogroups.com, <pmooney22@...> wrote:

"I'm a QRP operator and never use more than 5 Watts (SSB). With the antenna in the living room and at this power level I've been able to work Europe, Asiatic Russia, the Caribbean, South America, North America, and West Africa. I have been able to work over 80 countries with only 5 Watt SSB and this antenna."

from: http://www.kr1st.com/magloop.htm

KR1ST also has a receive loop at http://www.kr1st.com/swlloop.htm

Paul, 5B8BA

---In loopantennas@yahoogroups.com, <m.bunner1@...> wrote:

The KR1ST antenna is receive only.

10315. KR1ST antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-18 01:19:30 UTC
From: Mike N9LSD
Topic: 10315 Message: 10315

I am new to the group. has anyone built or is familiar with this transmitting loop? Thanx, mike

10316. RE: H Double Bay Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-11-25 03:31:27 UTC
From: <kr7k@...>
Topic: 5899 Message: 10316

Hi Lane,

I have used one of these extensively on 10 meters. I love that antenna. You can see a picture of it on my QRZ webpage. (KR7K) I have modeled these extensively and they will work in either polarization. I haven't used mine stretched out horizontally. The antenna is actually vertically polarized this way. It is interesting though since it might be used as a lower profile antenna on 40 or 75 meters mounted lower to the ground. Losses become more of an issue down on those bands though.

I wanted something with a bit more gain than a dipole on 10 but still easy to build I still wanted something horizontally polarized. This antenna fits the bill nicely. It models in EZNEC at about 10.5 dBi of gain over normal ground. In practice I have had excellent results with it. If you havent tried one, its worth the 5 bucks in hardware to build one and string it up in the nearest tree.

Good luck, and 73!

Wade - KR7K

---In loopantennas@yahoogroups.com, <lanenavyrn@...> wrote:

Paul Carr N4PC did a great article in CQ sometime in 1995. The antenna he designed and built was called the H Double Bay antenna. Other articles have called it the Skeleton Slot antenna. It is essentially two full wave lengths side by side but share one common side.

Has anyone tried these? I am wondering if instead of being mounted in the vertical plane such as the article suggests if it could be rotated 90 degrees and put up horizonal?

The website link to his article is here:

http://www.wz4c.com/Hdoublebay1.htm http://www.wz4c.com/Hdoublebay1.htm

the bottom of the page will take you to page two, bottom of page two takes you to page three.

Lane
Ku7i
San Diego

[Non-text portions of this message have been removed]

10317. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-01 14:59:35 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10317

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10318. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-01 14:59:35 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10318

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10319. RE: KR1ST antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-02 00:53:52 UTC
From: <finkirv@...>
Topic: 10315 Message: 10319

I suggest that before going to far, you Google Magnetic Loop Antennas -- there are lots of examples and you should have a good idea of the many ways others have built them -- and you can take the best of each!

Irv VE6BP

---In loopantennas@yahoogroups.com, <m.bunner1@...> wrote:

I am new to the group. has anyone built or is familiar with this transmitting loop? Thanx, mike

10320. Re: KR1ST antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-02 11:17:58 UTC
From: phil_m6mrp
Topic: 10315 Message: 10320

I agree with the other poster, just a basic magnetic loop, simple to build, I used the easy toroidial ring feed for mine as I work mainly qrp which also means the tunning capacitor vanes do not have to be that widely spaced so plenty of old ones out there to choose from, Steve Yates has a good collection of homebrew info for you to start with
http://www.aa5tb.com/loop.html
As for performance, well my efforts supprised me with good results from the UK into mainland EU and North Africa and I am located in a hole, very quiet on receive noise wise and they dont mind nearby objects like walls or ceilings, tunning is a bit if a fiddle when done manualy but you soon get used to doing it by ear and get dam close to the sweet spot, give it a go all you need is a plastic pipe to support, a ring of metal like a bicycle wheel rim or copper tube,an old variable tunning capacitor and one of many types of feed usualy coax but the toriodial ring works realy well for me.
Good luck with it and PS for 80m try googling the 80m frame antenna for your next build! you will love it.
Phil.

--- In loopantennas@yahoogroups.com, Mike N9LSD <m.bunner1@...> wrote:
>
>
> I am new to the group. has anyone built or is familiar with this transmitting loop?
Thanx, mike
>

10321. magnetic loop current

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-02 07:13:04 UTC
From: <silvergak@...>
Topic: 10321 Message: 10321

I was given all components of a 8' loop, 0.75" copper tube with huge butterfly capacitor. I plan to use a ferrite core as coupling. How many turns to match to 50 ohms?

10322. same capacitor different loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-02 07:27:20 UTC
From: Craig F. Simmons
Topic: 10322 Message: 10322

If you could swap the size of the actual loop and use the SAME capacitor would this be possible. In other words if you were to build a loop better suited for say 14 mhz - 228/29 mhz and a separate loop with dimensions better suited for say 7 mhz - 14 mhz, could you use a capacitor with enough, correct minimum and maximum capacitance to work on both antennas. For now lets just say QRP power levels only. I fully understand the losses that occur with the connections and the other problems associated with doing the, just trying to see if there is a capacitor range that is possible for both using just one capacitor. The M??-Loop uses the exact size loop for both antennas they sell, one includes 40 meters (Larger capacitor-Higher capacitance) and a smaller one for covering 10 meters -20, losing 30 and 40 meters (Has a lower range of capacitance). This question cam to mind thinking if everything is not permanent, all connections soldered (Not removable) this would be best! But..... for portable use, you will have to disconnect something, and if you could design a put together frame, with say ideal different size loops using the same capacitor this would be good. One bag of frame items, two loops (Made of something- to be determined) and one frame mounted capacitor that works for both. Looking at the two different capacitors used by M?? loop, if you had a capacitor that would go between 10-12pf (low) and 136-140pf (high) this could maybe cover both. This seems would be something that could be done because as you have a length of conductive material closer to the ideal band you are trying to get the loop to work, the capacitance is more predictable. Say different size loops, swappable and attachable to the same lugs,screws, mounting bolts, SO-239 connectors, whatever you decide to use for connection. If you look at every other "Portable Loop" there is, the connection is always less efficient and a permanent soldered connection. keeping this in mind, can we use the same capacitor, with different size loops to achieve better overall efficiency due to the actual size of the loop being optimized for the attended band(s).

10323. Re: magnetic loop current

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-02 16:45:35 UTC
From: phil_m6mrp
Topic: 10321 Message: 10323

There are some details on the web somewhere but mine used a type 64 toriodial ring (I think) nested in a slot on top of a plastic plumbing pipe mast with the loop through it and had two tight turns of the inner coax through the ring soldered direct to the outer coax shield with the coax running down through the pipe out of sight, and was 49 ohms when measured on 20m with a friends MFJ analyser, from what I have seen its sometimes 1,2 or 3 turns prob trial and error.
Phil

--- In loopantennas@yahoogroups.com, <silvergak@...> wrote:
>
> I was given all components of a 8' loop, 0.75" copper tube with huge butterfly capacitor. I plan to use a ferrite core as coupling. How many turns to match to 50 ohms?
>

10324. Re: magnetic loop current

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-02 16:53:11 UTC
From: phil_m6mrp
Topic: 10321 Message: 10324

Here is the link for the info you require
http://www.nonstopsystems.com/radio/frank_radio_antenna_magloop.htm

--- In loopantennas@yahoogroups.com, "phil_m6mrp" <dj_philonline@...> wrote:
>
> There are some details on the web somewhere but mine used a type 64 toriodial ring (I think) nested in a slot on top of a plastic plumbing pipe mast with the loop through it and had two tight turns of the inner coax through the ring soldered direct to the outer coax shield with the coax running down through the pipe out of sight, and was 49 ohms when measured on 20m with a friends MFJ analyser, from what I have seen its sometimes 1,2 or 3 turns prob trial and error.
> Phil
>
> --- In loopantennas@yahoogroups.com, <silvergak@> wrote:
> >
> > I was given all components of a 8' loop, 0.75" copper tube with huge butterfly capacitor. I plan to use a ferrite core as coupling. How many turns to match to 50 ohms?
> >
>

10325. Re: [loopantennas] magnetic loop current

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-02 19:29:52 UTC
From: K2TL
Topic: 10321 Message: 10325

That is found by trial and error. I use a toroid for coupling and get a perfect 1:1 with 5 turns on two stacked FT-240-61 cores on a 5 1/2 foot diameter loop. I use 1 inch hardline for the loop material. You might need to spread or tighten the turns. I find that close wound is best for me.
Jim
K2TL

On 12/2/2013 2:13 AM, silvergak@... wrote:
>
> I was given all components of a 8' loop, 0.75" copper tube with huge
> butterfly capacitor. I plan to use a ferrite core as coupling. How
> many turns to match to 50 ohms?
>
>

10326. RE: Re: [loopantennas] RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-03 04:20:50 UTC
From: <qrp.gaijin@...>
Topic: 10263 Message: 10326

Greetings,

I was again pondering some possible low-voltage RF amplifier designs and I stumbled upon a possible idea for a low-voltage (1.2 volts) wideband (untuned) active loop antenna amplifier. I'm wondering if the idea could work.

Consider a common-base NPN BJT amplifier configured as follows. At RF, the base is grounded by a 10 nF capacitor. At DC, the base is connected directly to the collector. The collector in turn goes through a resistor to +Vcc. The resistor value is adjusted for the desired current. The emitter is grounded, but not through a resistor as is usual: instead, the emitter is grounded through the loop antenna conductor itself. Thus the loop current (which we want to sense and amplify) is flowing directly through the emitter.

Amplifier output is taken from the collector through a coupling capacitor.

Could such an idea work as well as a low-voltage BJT differential-pair amp? The appeal of the above design is its simplicity.

>
>---In loopantennas@yahoogroups.com mailto:loopantennas@yahoogroups.com, <christrask@...>
wrote:
>
>
> > I just added the file "Active Loop Amplifier for 1p5V Operation.pdf" to
> > the group files section.

10327. Re: [loopantennas] same capacitor different loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-03 05:19:55 UTC
From: vk2tti@...
Topic: 10322 Message: 10327

C.F.Simmons from Max vk2tti.
It is possable to use different size loops with one capacitive tune/match sysrem. This idea is used in the MFJ936B loop tuner. I clean the contact areas with a brass brush before each use. Soldering would be better but you lose adaptability. For transmitting purposes the loop needs to be of an optimum length for each amateur band such that the capacitor vanes are in half mesh. For receive purposes great accuracy in tuning cannot be achieved as the signal waxes and wanes making it difficult to tune with precision. This has been my experience. Regards to all vk2tti.

----- Original Message -----
From: loopantennas@yahoogroups.com
To:
Cc:
Sent:Mon, 2 Dec 2013 10:27:20 +0300
Subject:[loopantennas] same capacitor different loops

If you could swap the size of the actual loop and use the SAME capacitor would this be possible. In other words if you were to build a loop better suited for say 14 mhz - 228/29 mhz and a separate loop with dimensions better suited for say 7 mhz - 14 mhz, could you use a capacitor with enough, correct minimum and maximum capacitance to work on both antennas. For now lets just say QRP power levels only. I fully understand the losses that occur with the connections and the other problems associated with doing the, just trying to see if there is a capacitor range that is possible for both using just one capacitor. The M??-Loop uses the exact size loop for both antennas they sell, one includes 40 meters (Larger capacitor-Higher capacitance) and a smaller one for covering 10 meters -20, losing 30 and 40 meters (Has a lower range of capacitance). This question cam to mind thinking if everything is not permanent, all connections soldered (Not removable) this would be best! But..... for portable use, you will have to disconnect something, and if you could design a put together frame, with say ideal different size loops using the same capacitor this would be good. One bag of frame items, two loops (Made of something-to be determined) and one frame mounted capacitor that works for both. Looking at the two different capacitors used by M?? loop, if you had a capacitor that would go between 10-12pf (low) and 136-140pf (high) this could maybe cover both. This seems would be something that could be done because as you have a length of conductive material closer to the ideal band you are trying to get the loop to work, the capacitance is more predictable. Say different size loops, swappable and attachable to the same lugs,screws, mounting bolts, SO-239 connectors, whatever you decide to use for connection. If you look at every other

"Portable Loop" there is, the connection is always less efficient and
a permanent soldered connection. keeping this in mind, can we use the
same capacitor, with different size loops to achieve better overall
efficiency due to the actual size of the loop being optimized for the
attended band(s).

Email sent using Optus Webmail

Links:
---
[1]
http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJydnE4M3FmBF9TAzk3MzU5NzE0BGdyc
ElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDMyMgRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE
zODU5OTA2MzM-?act=reply&messageNum=10322
[2]
mailto:k910dog@...?subject=Re%3A%20same%20capacitor%20different%20loops
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20same%20capacitor%20different%20loops
[4]
http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJmMmhpYmFpBF9TAzk3MzU5NzE0BGdyc
ElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzEzODU5OTA2MzM-
[5]
http://groups.yahoo.com/group/loopantennas/message/10322;_ylc=X3oDMTM3aGw0bDI2BF9TAzk3MzU5
NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDMyMgRzZWMDZnRyBHNsawN2dHBjBH
N0aW1lAzEzODU5OTA2MzMEdHBjSWQDMTAzMjI-
[6]
http://groups.yahoo.com/group/loopantennas/members;_ylc=X3oDMTJnanVrYmo4BF9TAzk3MzU5NzE0BG
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?o=6
[7]
http://groups.yahoo.com/group/loopantennas/links;_ylc=X3oDMTJoZnEyb3NxBF9TAzk3MzU5NzE0BGdy
cElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bGlua3MEc3RpbWUDMTM4NTk5MDYzMw
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[8]
http://groups.yahoo.com/group/loopantennas;_ylc=X3oDMTJmYnBqMjEzBF9TAzk3MzU5NzE0BGdycElkAz
EyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzEzODU5OTA2MzM-
[9] http://groups.yahoo.com/group/loopantennas/links
[10] http://groups.yahoo.com/group/loopantennas/files
[11] http://ph.groups.yahoo.com/group/loopantennas/photos
[12]
http://groupsyahoo.com/;_ylc=X3oDMTJlbjkwamRyBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwS
WQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTM4NTk5MDYzMw--
[13]
mailto:loopantennas-traditional@yahoogroups.com?subject=Change%20Delivery%20Format:%20Trad
itional
[14]
mailto:loopantennas-digest@yahoogroups.com?subject=Email%20Delivery:%20Digest
[15]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[16] http://info.yahoo.com/legal/us/yahoo/utos/terms/

[17] mailto:ygroupsnotifications@yahoogroups.com?subject=Feedback%20on%20the%20redesigned%20individual%20mail%20v1

10328. Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-03 16:16:26 UTC
From: <lz1aq@...>
Topic: 10328 Message: 10328

Hello,

I have made some experiments to evaluate the performance of simple 2-element arrays with small wideband active elements - dipoles or loops.
" Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements. Experimental Performance Evaluation"
http://www.lz1aq.signacor.com/docs/phased-array/2-ele_phased_array11.pdf
http://www.lz1aq.signacor.com/docs/phased-array/2-ele_phased_array11.pdf

Chavdar LZ1AQ
lz1aq@abv.bg
www.lz1aq.signacor.com http://www.lz1aq.signacor.com/ www.active-antenna.eu
http://www.active-antenna.eu/

10329. Re: [loopantennas] Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-05 00:36:21 UTC
From: Jim Wiley
Topic: 10328 Message: 10329

the link you posted doesn't work.

On Tuesday, December 3, 2013 8:18 AM, "lz1aq@..." <lz1aq@...> wrote:

Hello,

I have made some experiments to evaluate the
performance of simple 2-element arrays with small wideband active elements - dipoles or loops.
" Receiving Phased Array with Small Electric or
Magnetic Active Wideband
Elements. Experimental Performance Evaluation"
http://www.lz1aq.signacor.com/docs/phased-array/2-ele_phased_array11.pdf

Chavdar LZ1AQ
lz1aq@abv.bg
www.lz1aq.signacor.com www.active-antenna.eu

10330. Re: [loopantennas] Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-05 09:30:30 UTC
From: <lz1aq@...>
Topic: 10328 Message: 10330

Sorry, now it will work. The exact link was wrong due to versions mismatch. In any case going strightly to www.lz1aq.signacor.com will give you an access to every article.
Chavdar lz1aq
lz1aq@abv.bg

10331. RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-06 08:27:10 UTC
From: <crusty@...>
Topic: 10328 Message: 10331

More great work Chavdar. Thank you for sharing your findings.
I have some reading to do. :)

10332. Re: [loopantennas] RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-06 09:05:51 UTC
From: Andrew Ikin
Topic: 10328 Message: 10332

Chavdar,

Thanks for an interesting paper.

I have a few comments to make: There is no provision to amplitude balance the antennas or to compensate for minor delayline loss. One is therefore assumming that the antennas are always "Gain Match" even when the presence of nearby objects could be effecting the gain. This will in some circumstances reduce the F/B.

My experience with MW active Dipole, Active loop and Active K9AY arrays using

----- Original Message -----
From: crusty@...
To: loopantennas@yahoogroups.com
Sent: Friday, December 06, 2013 8:27 AM
Subject: [loopantennas] RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

More great work Chavdar. Thank you for sharing your findings.

I have some reading to do. :)

10333. Fw: [loopantennas] RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-06 09:15:38 UTC
From: Andrew Ikin
Topic: 10333 Message: 10333

Chavdar,

Please ignore the message below, it was sent in error when I was trying to put it in the "Drafts Folder" for editing later.

Kind regards

Andrew

----- Original Message -----
From: Andrew Ikin
To: loopantennas@yahoogroups.com
Sent: Friday, December 06, 2013 9:05 AM
Subject: Re: [loopantennas] RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Chavdar,

Thanks for an interesting paper.

I have a few comments to make: There is no provision to amplitude balance the antennas or to compensate for minor delayline loss. One is therefore assumming that the antennas are always "Gain Match" even when the presence of nearby objects could be effecting the gain. This will in some circumstances reduce the F/B.

My experience with MW active Dipole, Active loop and Active K9AY arrays using

----- Original Message -----
From: crusty@...
To: loopantennas@yahoogroups.com
Sent: Friday, December 06, 2013 8:27 AM
Subject: [loopantennas] RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

More great work Chavdar. Thank you for sharing your findings.

I have some reading to do. :)

10334. [loopantennas] RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-06 20:03:45 UTC
From: Andrew Ikin
Topic: 10328 Message: 10334

Dear Chavdar,

Thanks for an interesting paper.

I have a few comments to make: There is no provision to amplitude balance the antennas or to compensate for minor delay-line loss. One is therefore assuming that the antennas are always gain matched with frequency even when the presence of nearby objects could be affecting the gain. This will in some circumstances reduce the F/B as nearby objects (metal fences, power/phone line etc) affect the antennas near-field response especially at LF/MF.

My experience with MW active dipole, active loop and active K9AY arrays using variable delay-line and switched delay-line phasing indicate that the provision to vary the antennas gain is just as important as having control over the phasing.

I agree with your observation that a 1 to 10 frequency ratio is readily achievable. However, where the antenna spacing is very small, there is a further degrading in s/n due the amplifier noise not cancelling out in same way as the signal. This is more of an issue with small 1m diameter high gain loop antennas. Also with very close antenna spacing the array phasing and gain balance becomes very critical, causing pattern degradation. Therefore, it may be prudent for MW/LW use to allow for an increase in antenna spacing to over 30m.

Using the above arrays at HF can be quite disappointing due to signals having too much angular variance. Loop arrays offer the worst performance because they offer little rejection of rear high angle signals.

Additional Reference:

Keen's Wireless direction Finding, Third Edition 1938.

Kind regards

Andrew

10335. RE: [loopantennas] RE: Receiving Phased Array with Small Electric or Magnetic Active Wideband Elements

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-07 18:08:10 UTC
From: <lz1aq@...>
Topic: 10328 Message: 10335

Hello Andrew,
Thank you very much for your interest in my work.

--------Comment
I have a few comments to make: There is no provision to amplitude balance the antennas or to compensate for minor delay-line loss. One is therefore assuming that the antennas are always gain matched with frequency even when the presence of nearby objects could be affecting the gain. This will in some circumstances reduce the F/B as nearby objects (metal fences, power/phone line etc) affect the antennas near-field response especially at LF/MF. My experience with MW active dipole, active loop and active K9AY arrays using variable delay-line and switched delay-line phasing indicate that the provision to vary the antennas gain is just as important as having control over the phasing.

---------Answer
You are right - there is a gain variance. As shown on Fig.18 the signal difference between two antennas depends very much from electromagnetic environment it is up to + - 3 to 4 dB in bad conditions and less than 1 dB in clear place. And moreover it is frequency dependant. The loss in the delay line is usually less than 0.5 dB. Usually the gain of the amplifiers is not the problem (with 1% elements the difference can be set to be less than 0.2 dB). As you say the problem is the environment. But any precise gain correction is frequency dependant so changing frequency you have to change the gain correction. Probably with analogue phasers you can set precisely the best gain and phase and to increase the F/B. But this is time consuming , frequency dependant and for me not very practical. I do not think that it is so important to have let say 13 dB instead of 10 dB F/B on real signal. We must swallow the reduction of the F/B for the price of increased functionality and real wideband performance. In the case where the array is built in a clear environment such a correction is not needed. From the experiments you can see that without such corrections the F/B ratio can reach 45 dB in controlled conditions.

--------Comment
I agree with your observation that a 1 to 10 frequency ratio is readily achievable. However, where the antenna spacing is very small, there is a further degrading in s/n due the amplifier noise not cancelling out in same way as the signal. This is more of an issue with small 1m diameter high gain loop antennas.

---------Answer
Yes, I have pointed out that in very closely spaced elements you should have to use larger elements to improve the noise floor. See 5.5. in discussion part.
--------Comment
>Also with very close antenna spacing the array phasing and gain balance becomes very critical, >causing pattern degradation.

---------Answer
I do not think so. See 5.4, In very closely spaced arrays the main problem is the reduction of the effective height and the noise floor limitation, the optimal phasing is easily

obtained at least with controlled delay line. You can look at Fig.8 where the sensitivity to 20% deviation from the optimal delay is plotted. The pattern, at least in models, is not degraded down to very small D/wl. I can not say how is influenced the pattern in real environment – this will be very difficult and time consuming experiment but in my controlled experiments the F/B is not much degraded even below 0.05 D/wl. Look at Fig. 16, Experiment 3, where F/B ratio is plotted. For 1.8 MHz and D= 6m (0.036 D/wl) the F/B is between 25 and 35 dB for both loop and dipole arrays.

--------Comment
>Therefore, it may be prudent for MW/LW use to allow for an increase in antenna spacing to over >30m.

---------Answer
Yes, The optimal distance D is somewhere between 0.1 to 0.25 D/wavelength. That means for 1MHz, D is between 30 and 75 m . But my main question is how to squeeze D in order to build very closely spaced arrays which are still usable. I am pretty sure that with careful antenna design and proper amplifiers and matching we can reach uncompromised performance with D/wl values equal or below 0.05. For spaces 0.01 wl and below I suppose that the additional problems will be common mode signal leakage and probably the reactive filed influence between elements.

--------Comment
>Using the above arrays at HF can be quite disappointing due to signals having too much angular >variance. Loop arrays offer the worst performance because they offer little rejection of rear high >angle signals.

---------Answer
I do not agree. If we expect the behavior of several element yagi of course this is not the case. But the 2-el loop array has decent directional pattern and it is the best RX antenna in my small yard. The 2el- short dipole mode is influenced too much by nearby cables and the metal fence and has too high noise from nearby high voltage electrical line. Practical comparisons to K9AY loop show that the directional characteristics of the 2el-loop array are definitely better (at least in my yard). The loop array has also narrower front lobe compared to the dipole (vertical) array. From the other hand in clear environment using loops and dipoles with the same switching scheme and delay setup is an advantage – it is always better to have 2 antennas with different patterns.

--------Comment
>Additional Reference:
>Keen’s Wireless direction Finding, Third Edition 1938.

---------Answer
Unfortunately I do not have an access to this paper. Some times I have a feeling that I am inventing the wheel again. I am pretty sure that a lot of work has been done in this field in 30’s upto 60’s years of 20th century. I am not professional in this field and I have done this work to satisfy my own curiosity.

Kind Regards,

Chavdar

Lz1aq@abv.bg mailto:Lz1aq@abv.bg
www.lz1aq.signacor.com http://www.lz1aq.signacor.com/

10336. RE: Rolled a loop using a Harbor freight tube roller

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-11 00:14:33 UTC
From: <beltran_thomas@...>
Topic: 10232 Message: 10336

There is a HF near me, and I have been looking at the roller. Also, the SWAG upgrade kit. But thanks for posting. Tom

10337. RE: [loopantennas] RE: Rolled a loop using a Harbor freight tube roller

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-11 01:20:37 UTC
From: The Silver Fox
Topic: 10232 Message: 10337

Looks like it costs more than buying a commercial loop unless of course you are considering the lower bands.

73,

Alan – W6ARH

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of beltran_thomas@...
Sent: Tuesday, December 10, 2013 4:15 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] RE: Rolled a loop using a Harbor freight tube roller

There is a HF near me, and I have been looking at the roller. Also, the SWAG upgrade kit. But thanks for posting. Tom

---

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2013.0.3462 / Virus Database: 3658/6907 - Release Date: 12/10/13

10338. Re: Rolled a loop using a Harbor freight tube roller

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-11 14:18:59 UTC
From: phil_m6mrp
Topic: 10232 Message: 10338

This guy built his own bender/roller for his giant 80m rx/tx magnetic loop, very impressive finished item. http://www.pa0kv.nl/content/hamradio.html
Phil M6MRP

--- In loopantennas@yahoogroups.com, everettsharp@... wrote:
>
>
> Hi Guys.
>
> I just finished rolling a 10' long piece of 3/4" hard, type L, copper
>
>
> Everett N8CNP
>

10339. John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-12 19:31:51 UTC
From: <kc7nj@...>
Topic: 10339 Message: 10339

Does anyone know how to contact John Stumm. I have questions about test results and information he put in the files section. These files no longer appear, maybe too old? Thanks. Dave

10340. Re: [loopantennas] John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-13 15:15:15 UTC
From: Kurt Poeschel
Topic: 10339 Message: 10340

I have his contact info. I will tell him that you are trying to contact him. Kurt N6QPT

Sent from my iPhone

> On Dec 12, 2013, at 11:31 AM, <kc7nj@yahoo.com> wrote:
>
> Does anyone know how to contact John Stumm. I have questions about test results and information he put in the files section. These files no longer appear, maybe too old? Thanks. Dave
>
>

10341. Re: [loopantennas] John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-13 18:46:02 UTC
From: <kc7nj@...>
Topic: 10339 Message: 10341

Thanks. I'm trying to locate his files about the Ramsey Super Magnet antenna. Dave

10342. RE: John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-13 18:52:49 UTC
From: <lowalacrity@...>
Topic: 10339 Message: 10342

Hi Dave,
I will repost picture/s of the loop head I made for the Ramsey Signal Magnet.
Not sure what happen to it. Long ago, Steve, the moderator suggested putting pics in the files section for better resolution. That may not be the case anymore.. So it will appear in the photos. My latest head is comprised of Everett's Stacked Toroid Loop for LW/MW and is used on a Palomar base. It truly amazes.. For the message that attended the Ramsey photo, see post #655. Reception was made adjacent to a high tension transmission line as well!
73

John
KG6ZBN

---In loopantennas@yahoogroups.com, <kc7nj@...> wrote:

Does anyone know how to contact John Stumm. I have questions about test results and information he put in the files section. These files no longer appear, maybe too old?
Thanks. Dave

10343. RE: John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-13 20:46:37 UTC
From: <kc7nj@...>
Topic: 10339 Message: 10343

Thanks John,
I hope this hasn't been an inconvenience. I just assembled the Ramsey antenna and like most of us I have to see if I can improve it. I have a bunch of rods similar to the one in the Super Magnet and thought about bundling several of them and winding with Litz wire instead of the magnet wire that Ramsey supplies in the kit. May try putting two or three end to end. Thanks again. Dave K2ZU

10344. RE: John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-13 23:23:31 UTC
From: <lowalacrity@...>
Topic: 10339 Message: 10344

Dave,
I posted the pics of my old Ramsey shielded loop from '05 plus a couple of later creations in my John's Stacked Toroid Loop photo file. They are a final version of my Stacked Toroid Loop as a Palomar amplified loop head and a 7.5" FSL. Both designs from Everett Sharp. Both work extremely well on LW and MW. Litz would probably help the Ramsey as well a close winding it as well..

John.
KG6ZBN

10345. RE: John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-13 23:53:07 UTC
From: <kc7nj@...>
Topic: 10339 Message: 10345

I see why I couldn't find the files. I was looking for John Stumm not Lowalacrity. Thanks for the info. I tried putting 8 inch rods end to end on both ends of the Ramsey antenna and it makes a LOT of difference in received signal level.
The antenna will be about 26 inches long with the extra 8 inch rods but will still work ok from a parked car. I was using a 3' square loop but it's too much trouble to set it up and take it down.
Funny thing about the Litz wire. I thought the Q would be greater and the tuning sharper but the tuning doesn't seem to be any different except for the shift down in frequency due to the increase in inductance. I'm guessing the Q is sharper but I don't have a simple way to measure it.
If I manage to make enough of a difference that enables me to hear Martians I'll let you know. Dave

10346. RE: John Stumm

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-14 16:44:53 UTC
From: <tenorman1952@...>
Topic: 10339 Message: 10346

There is currently a discussion of the Ramsey loop going on at the ferriterodantennaexperimenters yahoo group.
http://groups.yahoo.com/neo/groups/ferriterodantennaexperimenters/info

Paul - AE5JU

10347. KD9SV preamplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-15 06:14:11 UTC
From: Chris Waldrup
Topic: 10347 Message: 10347

Hi,
I am building up the KD9SV preamplifier using the circuit board and having loads of trouble with oscillation is the gain pot is turned much past about 30 percent.
I'm testing it on the bench and feeding 1850 khz out of my 8640 generator into the amp and the amp is terminated with a 50 ohm load. I am looking at the output with my scope probe (10x) across the load, and the unit is oscillating in the FM broadcast band as seen with the frequency counter connected to an output of my scope.
I tried removing the flux around the dual gate MOSFET (using NTE455) package thinking that might help but it didn't.
Has anyone else built this, and if so did yours work initially?

Thanks!

Chris
KD4PBJ
—
Sent from Mailbox for iPhone

10348. Re: HIGH VOLTAGE BUTTERFLY CAPACITOR'S KITS FOR SALE

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-17 03:25:33 UTC
From: <pop_vasile@...>
Topic: 8994 Message: 10348

3" OD ROTOR + 2 STATOR PLATES $ 5.00
4" OD ROTOR + 2 STATOR PLATES $ 6.50
5" OD ROTOR + 2 STATOR PLATES $ 7.75
6" OD ROTOR + 2 STATOR PLATES $ 8.75
8" OD ROTOR + 2 STATOR PLATES $ 10.50
10" OD ROTOR + 2 STATOR PLATES $ 14.00

73 de VA6POP
send me an e-mail
yo5bzz(at)gmail.com

Location: Calgary,CANADA

10349. Covering the MFJ 1788 loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-18 22:48:54 UTC
From: <ve3wdm@...>
Topic: 10349 Message: 10349

I live in a condo and wanted to purchase the MFJ 1788 loop and place it under a plastic cover such as a BBQ cover. This way the antenna to the condo cops looks like a BBQ. My question is has anyone done this and if so how did it work out? Mike
VE3WDM

10350. For Sale; Active Antenna AAA-1B by LZ1AQ

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-26 20:37:43 UTC
From: larry_n0sa
Topic: 10350 Message: 10350

I have two of the AAA-1B active antenna amplifiers that I got from LZ1AQ
These have both been only slightly used and come with all the extra parts. They both work and look as new.
The price new was about $120 shipped. I would like to get $90.00 each, shipped in the CONUSA. PayPal preferred.
These are very nice active amplifiers and they work very well. I have just changed directions so I no longer use them. I used them with small copper loops and got very good performance from them.
Thank You
Larry Naumann n0sa

10351. Best cheap multimeter for capacitance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 09:33:17 UTC
From: <k910dog@...>
Topic: 10351 Message: 10351

I know that there are several Fluke and other top quality multimeter out there that measure capacitance but is there a decent brand/model that has a good range for measuring capacitance loop building persons could buy for a reasonable price?

10352. Butterfly Capacitors from copper stock?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 13:25:43 UTC
From: <k910dog@...>
Topic: 10352 Message: 10352

Anyone looked at making butterfly capacitor kits from copper. The weld that MFJ used to attach their butterfly capacitor to their aluminum loop is a great concept but we all know that copper is better conductor, and if we could braze/solder the connection of the butterfly loop directly to the copper loop (Homebrew) this would be a lot more efficient.

10353. Re: Best cheap multimeter for capacitance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 14:31:40 UTC
From: AlienRelics
Topic: 10351 Message: 10353

Good question. I have quite a few DMMs with built-in capacitance measurement, including several Flukes at work. The lowest scale on all of the ones I've used only go down to the nF scale, down to one pF (0.001nF).

I used to build and sell capacitance meters. Originally with a standard 50uA meter for the display, then I built them to use any DMM as the display on the 200mV scale.

Here is a schematic, for best results us the TLC555 (CMOS version):
http://www.polyphoto.com/tutorials/ElectronicCircuits/Dual555CapMeter150dpi.jpg

It does require a regulated voltage. A 78L05 works fine, or pretty much any modern well-filtered switching regulator. It wasn't meant for measuring large capacitors, so the largest capacitor it will measure is 20uF on the 2uF scale when your autoranging meter switches to the 2V scale.

I still have one. I built one ugly on purpose so I wouldn't/couldn't sell it. It easily resolves 0.1pF pretty stably. Keep in mind that with any measuring system, resolution is not the same as accuracy. I have a 0.1% capacitor I use to calibrate it on the 2000pF scale, and trust the tolerance of the other resistors.

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, <k910dog@...> wrote:
>
> I know that there are several Fluke and other top quality multimeter out there that measure capacitance but is there a decent brand/model that has a good range for measuring capacitance loop building persons could buy for a reasonable price?
>

10354. RE: [loopantennas] Best cheap multimeter for capacitance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 15:51:58 UTC
From: William Young
Topic: 10351 Message: 10354

I now have a Honeytek A6013L digital C meter, range: 0.1 pF to 20000 microFd bought new on ebay. I like it, but I cannot really comment on its accuracy. So far, for me having capacitances read from it is better than capacitances from my old Heathkit RLC bridge. Bill Young WD5HOH

To: loopantennas@yahoogroups.com
From: k910dog@...
Date: Sat, 28 Dec 2013 01:33:17 -0800
Subject: [loopantennas] Best cheap multimeter for capacitance

I know that there are several Fluke and other top quality multimeter out there that measure capacitance but is there a decent brand/model that has a good range for measuring capacitance loop building persons could buy for a reasonable price?

10355. RE: [loopantennas] Butterfly Capacitors from copper stock?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 16:17:43 UTC
From: Brian Burns
Topic: 10352 Message: 10355

~Anyone looked at making butterfly capacitor kits from copper. The weld that MFJ used to attach their butterfly capacitor to their aluminum loop is a great concept but we all know that copper is better conductor, and if we could braze/solder the connection of the butterfly loop directly to the copper loop (Homebrew) this would be a lot more efficient.

Copper is quite soft, easily bent, and difficult to de-burr. I would use thin brass for capacitor plates for its easier working and polishing//de-burring properties. It solders very easily, and I suspect that its conductivity is so close to copper that “there’s not enough difference to make a difference”.

Cheers,

Brian Burns Ex: W5BRO, K6UCD

See my website: www.lessonsinlutherie.com

This email is free from viruses and malware because avast! Antivirus protection is active.
http://www.avast.com

10356. RE: [loopantennas] Butterfly Capacitors from copper stock?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 16:49:43 UTC
From: <gnuarm.2006@...>
Topic: 10352 Message: 10356

---In loopantennas@{{emailDomain}}, <brian@...> wrote:

~Anyone looked at making butterfly capacitor kits from copper. The weld that MFJ used to attach their butterfly capacitor to their aluminum loop is a great concept but we all know that copper is better conductor, and if we could braze/solder the connection of the butterfly loop directly to the copper loop (Homebrew) this would be a lot more efficient.

Copper is quite soft, easily bent, and difficult to de-burr. I would use thin brass for capacitor plates for its easier working and polishing//de-burring properties. It solders very easily, and I suspect that its conductivity is so close to copper that “there’s not enough difference to make a difference”.

Cheers,

Brian Burns Ex: W5BRO, K6UCD

See my website: www.lessonsinlutherie.com

Considering that the starting point was Aluminum and the change to copper was to improve the conductivity, then yes, Brass has a lower conductivity and *will* make a difference. The resistivity of these materials in nOhm m are

Cu - 17.1
Al - 26.5
Brass - 64

Of course the composition of Brass varies a bit and so will the resistivity, but it won't change enough to alter these relative amounts.

In changing from Aluminum to Copper, I would question the resistance of the soldered connection compared to the solid body of the Copper. It may well be that the added resistance of the welded Aluminum is less than that of the soldered joints. Solder is *much* better than mechanical connections, but I expect a weld is significantly better yet. However the devil is in the details... just how good a solder joint you get.

Anyone have an idea of the relative resistance of the antenna materials to the radiation resistance? Wouldn't that be what determines when you have reached a point of diminishing returns in optimizing the material resistance?

Rick

10357. RE: Best cheap multimeter for capacitance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 20:15:18 UTC
From: <jeff@...>
Topic: 10351 Message: 10357

I use both the SmartTweezers ($350, but really slick) and the AADE Model iIB ($99 kit). The AADE will measure L and C very stably and I carry it to hamfest tailgates. Get the 3/4 inch binding post spacing option - it fits standard banana jack spacing. See it at www.aade.com.

The SmartTweezer also gives you Q and ESR. It's a bit more precise, but the AADE's 1 to 2% is fine for most of the stuff I do :)

Jeff W3HVU

10358. Re: [loopantennas] RE: Best cheap multimeter for capacitance

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 22:34:54 UTC
From: John Sterkeson
Topic: 10351 Message: 10358

I built the L-C meter kit from : electronics-diy.com . Very accurate for most purposes. Cost about..... $70.00

John
KC9ZYT

From: jeff@123jeff.com
Sent: Saturday, December 28, 2013 2:15 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] RE: Best cheap multimeter for capacitance

I use both the SmartTweezers ($350, but really slick) and the AADE Model iIB ($99 kit). The AADE will measure L and C very stably and I carry it to hamfest tailgates. Get the 3/4 inch binding post spacing option - it fits standard banana jack spacing. See it at www.aade.com.

The SmartTweezer also gives you Q and ESR. It's a bit more precise, but the AADE's 1 to 2% is fine for most of the stuff I do :)

Jeff W3HVU

10359. Re: [loopantennas] Butterfly Capacitors from copper stock?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-28 23:35:05 UTC
From: Andy Gardner
Topic: 10352 Message: 10359

Yes. If I was doing one in brass, I'd be silver-plating all the components before final assembly, then using silver solder. That would give you a nice high-q capacitor.

On 29/12/2013, at 5:49 AM, <gnuarm.2006@...> <gnuarm.2006@...> wrote:

> Considering that the starting point was Aluminum and the change to copper was to improve the conductivity, then yes, Brass has a lower conductivity and *will* make a difference. The resistivity of these materials in nOhm m are
>
> Cu - 17.1
>
> Al - 26.5
>
> Brass - 64
>
> Of course the composition of Brass varies a bit and so will the resistivity, but it won't change enough to alter these relative amounts.
>
> In changing from Aluminum to Copper, I would question the resistance of the soldered connection compared to the solid body of the Copper. It may well be that the added resistance of the welded Aluminum is less than that of the soldered joints. Solder is *much* better than mechanical connections, but I expect a weld is significantly better yet. However the devil is in the details... just how good a solder joint you get.
>

10360. Re: [loopantennas] RF Systems DX-One Pro MkII - Bi-Loop or not ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2013-12-30 15:00:45 UTC
From: <ulrich.ruch@...>
Topic: 3467 Message: 10360

Hi Fraser

just once more browsing thru DX-one threads...: apparently you are in possession of Xrays! Could you please forward copies to my email address ulrich.ruch@gmx.ch mailto:ulrich.ruch@gmx.ch. My headamplifier has been laying around defective for more than one year, and all my queries at RFS remained unanswered. I would therefore like to have it repaired by some local - but for this I need to know how to get access to the amplifier resp. how disassembly is made without causing any damage to the rest of the antenna stub.

Looking forward with keen interest to Hearing from you.

73s and happy New Year
Ulrich Ruch
Hinterester 13
CH 8184 Bachenbülach

10361. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-01 14:25:28 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10361

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10362. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-01 14:25:28 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10362

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10363. RE: RF Systems DX-One Pro MkII - Bi-Loop or not ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-01 21:29:26 UTC
From: <ihmeyers19@...>
Topic: 3467 Message: 10363

I had a DX-One (MK2) for about two years. It worked very well but my HOA made me take in down and I ended up selling it.

1) It is ABSOLUTELY an omni-direction vertical.

2) It was the best vertical I had ever used and I had most of them. I now have a DX Engineering active whip because it is lower profile. I would say it has 80%+ of the performance of the DX-One at 25% of the price. Where the DX-One REALLY excelled was in the LW band where reception was significantly better than with any other antenna I ever used.

3) I seem to recall that the developer (and President) of RF Systems died earlier this year. My understanding was that the company was no longer in business though it seems Universal Radio still carries their products.

73, and Happy New Year,
Ian Meyers
Boynton Beach, Flroida

10364. Re: [loopantennas] RE: RE: 1.5-volt active loop antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-02 05:19:35 UTC
From: <qrp.gaijin@...>
Topic: 10263 Message: 10364

In loopantennas@yahoogroups.com, <christrask@...> wrote:

> I just deleted that earlier PDF file and replaced it with "Active Antenna Amplifiers for Low Voltage Operation.pdf" that has the low input impedance amplifier on the second page. This is still a work in progress.

I'm thinking about building the low-input-impedance amplifier on the second page, using 2N3904 transistors and running off of 1.2 volts. Intended use is for shortwave listening and maybe MW listening. A couple of questions:

1. Are the ferrite beads necessary?

2. I'm thinking about winding the inductors and transformers as follows. All inductors will be wound on FT50-43 cores. T1: 20 turns, center-tapped. T2: 20 turns primary, 20 turns secondary, each center-tapped. L1: 20 turns. T3: 20 turns primary (center-tapped), 20 turns secondary (output). Do these values sound reasonable?

3. For Q1-Q4, what base and collector voltages should I aim for?

4. Is symmetrical physical construction important?

5. Why can't we take the antenna output directly off of the T2 secondary, using Q3 and Q4 only and eliminating Q1 and Q2?

6. I'm planning on using the coaxial cable to supply power to the antenna, using a bias tee and running +Vcc through the T2 secondary (similar to the original M0AYF design). Any problems with this approach?

Thanks for any advice.

10365. Re: RF Systems DX-One Pro MkII - Bi-Loop or not ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-02 16:43:04 UTC
From: johnnyc604
Topic: 3467 Message: 10365

Ian,

Did you by any chance have a Wellbrook 330S or 1530S in the past collection of antennas you could compare the RF Systems to?

Thanks,

John

--- In loopantennas@yahoogroups.com, <ihmeyers19@...> wrote:
>
> I had a DX-One (MK2) for about two years. It worked very well but my HOA made me take in down and I ended up selling it.
>
> 1) It is ABSOLUTELY an omni-direction vertical.
>
> 2) It was the best vertical I had ever used and I had most of them. I now have a DX Engineering active whip because it is lower profile. I would say it has 80%+ of the performance of the DX-One at 25% of the price. Where the DX-One REALLY excelled was in the LW band where reception was significantly better than with any other antenna I ever used.
>
> 3) I seem to recall that the developer (and President) of RF Systems died earlier this year. My understanding was that the company was no longer in business though it seems Universal Radio still carries their products.
>
> 73, and Happy New Year,
> Ian Meyers
> Boynton Beach, Flroida
>

10366. Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-03 23:15:36 UTC
From: <ve7sl@...>
Topic: 10366 Message: 10366

Does anyone in the group have experience with this product:

https://www.sv1afn.com/j310preamp.html

It looks to be very well constructed and suitable for a loop preamp.

Steve / VE7SL

10367. Re: RF Systems DX-One Pro MkII - Bi-Loop or not ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-03 23:53:59 UTC
From: <ihmeyers19@...>
Topic: 3467 Message: 10367

Unfortunately not John. I do have a Pixel Pro 1B now. No comparison, the DX-One was WAY better. In fact I think all in my DX Engineering Active Vertical is better than the Pixel as well.

Maybe I am just lucky because this is a pretty low noise QTH but here at least the only thing I get out of the Pixel is directionality and that's just on BCB. The overall signal levels on the Pixel are a few db lower than the vertical on anything above say 3 MHZ. Not awful / unreadable but lower than on the vertical and of course there is virtually zero directionality on skywave.

I guess if you lived in a noisy environment a loop would be much more beneficial but it hasn't been here, Perhaps a Wellbrook would be better but there seems to be no consensus on that. Guy Atkins' tests point to the Wellbrook, Jack Smith's to the Pixel and both of those guys are knowledgeable, creditable sources so maybe its a QTH specific thing.

JMHO.

73,
Ian

10368. Re: [loopantennas] Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-04 00:21:34 UTC
From: Gary Smith
Topic: 10366 Message: 10368

Looks really interesting. Might just order it and try it with my FSL just for fun. I already have an 18 db preamp that works very well, but I always like to play with stuff.

Gary
WA1TJB

On Friday, January 3, 2014 6:15 PM, "ve7sl@..." <ve7sl@...> wrote:

Does anyone in the group have experience with this product:

https://www.sv1afn.com/j310preamp.html

It looks to be very well constructed and suitable for a loop preamp.

Steve / VE7SL

10369. Re: [loopantennas] Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-04 00:26:18 UTC
From: Gary Smith
Topic: 10366 Message: 10369

Does anyone know where I can get the adapter from sma connector to a BNC?

Gary
WA1TJB

On Friday, January 3, 2014 7:21 PM, Gary Smith <wa1tjb@yahoo.com> wrote:

Looks really interesting. Might just order it and try it with my FSL just for fun. I already have an 18 db preamp that works very well, but I always like to play with stuff.

Gary
WA1TJB

On Friday, January 3, 2014 6:15 PM, "ve7sl@..." <ve7sl@...> wrote:

Does anyone in the group have experience with this product:

https://www.sv1afn.com/j310preamp.html

It looks to be very well constructed and suitable for a loop preamp.

Steve / VE7SL

10370. RE: Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-04 18:58:08 UTC
From: <davelimmer@...>
Topic: 10366 Message: 10370

Hi Steve,

I used a version of this circuit many years ago as a relay-switched preamp for a homebrew communications receiver, and it worked extremely well ahead of an SBL-1 mixer.

It's essentially cribbed from the "Omega" HF transceiver design by G3WPO and G4JST, which was published in the UK in the mid-80s in the now defunct "Ham Radio Today" magazine. It might be nice if SV1AFN acknowledged this sometime...

A nice design, though, and the SMD implementation is very neat.

Regards,

Dave

10371. Re: [loopantennas] Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-05 05:29:29 UTC
From: Steve
Topic: 10366 Message: 10371

>Does anyone know where I can get the adapter from sma connector to a BNC?

dozens on e-bay and with free-shipping to boot!

Steve

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10372. Re: [loopantennas] RE: Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-05 05:30:11 UTC
From: Steve
Topic: 10366 Message: 10372

Thanks info Dave....I was not aware of the history.

Steve / 73

> Hi Steve,
>
> I used a version of this circuit many years ago as a relay-switched preamp
> for a homebrew communications receiver, and it worked extremely well ahead
> of an SBL-1 mixer.
>
> It's essentially cribbed from the "Omega" HF transceiver design by G3WPO
> and G4JST, which was published in the UK in the mid-80s in the now defunct
> "Ham Radio Today" magazine. It might be nice if SV1AFN acknowledged this
> sometime...
>
> A nice design, though, and the SMD implementation is very neat.
>
> Regards,
>
> Dave

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10373. RE: Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-06 16:41:26 UTC
From: <3ym3ym@...>
Topic: 10366 Message: 10373

The website doesn't mention the input impedance of the amplifier, but it looks like it is fairly high. This is not optimal for the loop, which works better when loaded with a low impedance.
You can read excellent articles by Chris N7ZWY in the files section of this group to learn more about loop preamps.
This amplifier may be more suitable for a short whip.

73, Mike

10374. Re: [loopantennas] RE: Dual JFET Preamp?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-07 15:24:58 UTC
From: Chris Trask
Topic: 10366 Message: 10374

>
>The website doesn't mention the input impedance of the amplifier, but it looks like it is fairly high. This
>is not optimal for the loop, which works better when loaded with a low impedance.
>You can read excellent articles by Chris N7ZWY in the files section of this group to learn more about loop
>preamps.
>This amplifier may be more suitable for a short whip.
>

Yes, it's more suitable for short whip (monopole) antennas that require a high input impedance amplifier. Loops have a very low terminal impedance, so a balanced common-base amplifier is more suitable. I have a fairly rigorous one in the files section, and a simpler one was mentioned here recently.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10375. Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-08 12:14:07 UTC
From: Jose A. Kucher
Topic: 10375 Message: 10375
Attachments: 1 described; binary payloads are missing from this source WARC

Loop Antenna News and Information Forum

Low noise preamp for wideband loop

Friends im searching for a very low noise wideband loop preamp,
is for use in areas with very weak Mw signals, my loop is a 3mt
diameter wire loop and im testing the preamp with two 2n2222.

this preamp have noise in order the signals i want to receive, the
preamp can receive it, but adding a strong noise floor

Here the loop, in past year DX-camp in a remote farm in patagonia Argentina

Jose Kucher, Neuquen Argentina

10376. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-08 13:54:54 UTC
From: brian nsl
Topic: 10375 Message: 10376

Jose,
I would recommend that you look at this loop antenna out of interest.
There are many ' imitations ' around but it does really work and is cheap to build.
Good luck with your project.
Regards for 2014,
72, Brian, GØNSL.
----- Original Message -----
From: Jose A. Kucher
To: loopantennas@yahoogroups.com
Sent: Wednesday, January 08, 2014 12:14 PM
Subject: [loopantennas] Searching for a very low noise wideband loop preamp

10377. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-08 14:02:07 UTC
From: Adrian Flynn
Topic: 10375 Message: 10377

What "Loop" no info in your post!
73
Adrian KF7DYU

On Wed, Jan 8, 2014 at 8:54 AM, brian nsl <brian.nsl@...> wrote:

>
>
> *Jose,*
> * I would recommend that you look at this loop antenna out of
> interest.*
> *There are many ' imitations ' around but it does really work and is cheap
> to build.*
> *Good luck with your project.*
> * Regards for 2014,*
> * 72, Brian, GØNSL.*
>
> ----- Original Message -----
> *From:* Jose A. Kucher <saguillar@...>
> *To:* loopantennas@yahoogroups.com
> *Sent:* Wednesday, January 08, 2014 12:14 PM
> *Subject:* [loopantennas] Searching for a very low noise wideband loop
> preamp
>
>
>
>
>

10378. Fw: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-08 14:12:16 UTC
From: brian nsl
Topic: 10378 Message: 10378

Jose,
I would recommend that you look at this loop antenna out of interest.

1.. A Wide Bandwidth Active Loop Receiving Antenna. - QSL.net
www.qsl.net/m0ayf/active-loop-receiving-antenna.html☐Broad Bandwidth Loop Antenna. ... The best performing receive antenna tested was an
2.. active loop design by John (G8CQX) upon which my .... 73,s. Des (M0AYF)
3.. ☐Circuit details and ... - ☐Loop amplifier schematic. - ☐The loop amplifiers "power ...
There are many ' imitations ' around but it does really work and is cheap to build.
Good luck with your project.
Regards for 2014,
72, Brian, GØNSL.
----- Original Message -----
From: Jose A. Kucher
To: loopantennas@yahoogroups.com
Sent: Wednesday, January 08, 2014 12:14 PM
Subject: [loopantennas] Searching for a very low noise wideband loop preamp

10379. RE: Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-08 16:02:31 UTC
From: <3ym3ym@...>
Topic: 10375 Message: 10379

Hi Jose,

If you are really interested in receiving weak signals, tuned loop will work better than broadband loop.

73, Mike

10380. RE: Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-08 20:59:29 UTC
From: <la2pj@...>
Topic: 10375 Message: 10380

Why not try one of the Wellbrook preamps?
(http://www.wellbrook.uk.com/antennashop/index.php?route=common/home
http://www.wellbrook.uk.com/antennashop/index.php?route=common/home)

73's
Egil - LA2PJ

10381. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-09 16:05:53 UTC
From: Chris Trask
Topic: 10375 Message: 10381

-----Original Message-----
>From: "Jose A. Kucher" <saguillar@...>
>Sent: Jan 8, 2014 5:14 AM
>To: loopantennas@yahoogroups.com
>Subject: [loopantennas] Searching for a very low noise wideband loop preamp
>
>Loop Antenna News and Information Forum
>
>Low noise preamp for wideband loop
>
>Friends im searching for a very low noise wideband loop preamp,
>is for use in areas with very weak Mw signals, my loop is a 3mt
>diameter wire loop and im testing the preamp with two 2n2222.
>
>this preamp have noise in order the signals i want to receive, the
>preamp can receive it, but adding a strong noise floor
>

I just uploaded a revised version of my sketches of low-voltage active antenna amplifiers into the group files section:

Active Antenna Amplifiers for Low Voltage Operation RevA.pdf

They are oriented towards 1.5V applications, but can be used at higher voltages. The first two schematics require that the transistors be parts of a monolithic array, such as the CA3046 or HFE3046. The third schamatic includes feedback for correcting the imbalance when using unmatched transistors, such as individual 2N2222s.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10382. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-09 16:18:42 UTC
From: Horacio Nigro
Topic: 10375 Message: 10382

http://www.ebay.com/itm/LNA-UKW-FM-RADIO-88-108-MHZ-VHF-3M-4M-super-low-noise-amplifier-NF-0-4dB-18dB-/111249275393?pt=LH_DefaultDomain_0&hash=item19e6f93a01
.

73

Horacio
Uruguay

2014/1/9 Chris Trask <christrask@earthlink.net>

>
>
>
>
> -----Original Message-----
> >From: "Jose A. Kucher" <saguillar@...>
> >Sent: Jan 8, 2014 5:14 AM
> >To: loopantennas@yahoogroups.com
> >Subject: [loopantennas] Searching for a very low noise wideband loop
> preamp
> >
> >Loop Antenna News and Information Forum
>
> >
> >Low noise preamp for wideband loop
> >
> >Friends im searching for a very low noise wideband loop preamp,
> >is for use in areas with very weak Mw signals, my loop is a 3mt
> >diameter wire loop and im testing the preamp with two 2n2222.
> >
> >this preamp have noise in order the signals i want to receive, the
> >preamp can receive it, but adding a strong noise floor
> >
>
> I just uploaded a revised version of my sketches of low-voltage active
> antenna amplifiers into the group files section:
>
> Active Antenna Amplifiers for Low Voltage Operation RevA.pdf
>
> They are oriented towards 1.5V applications, but can be used at higher
> voltages. The first two schematics require that the transistors be parts of
> a monolithic array, such as the CA3046 or HFE3046. The third schamatic
> includes feedback for correcting the imbalance when using unmatched
> transistors, such as individual 2N2222s.
>

> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>
>

10383. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-09 16:32:54 UTC
From: Rob
Topic: 10375 Message: 10383

Hola Horacio,
This amplifier, you link here, is for VHF and he is looking for Long- , Medium- and Shortwave so he can't use this one.
Best 73
Rob PE9PE

Horacio Nigro <hanigrodx@...> , 9-1-2014 17:18:

http://www.ebay.com/itm/LNA-UKW-FM-RADIO-88-108-MHZ-VHF-3M-4M-super-low-noise-amplifier-NF-0-4dB-18dB-/111249275393?pt=LH_DefaultDomain_0&hash=item19e6f93a01.

73

Horacio
Uruguay

2014/1/9 Chris Trask <christrask@...>

-----Original Message-----
>From: "Jose A. Kucher" <saguillar@...>
>Sent: Jan 8, 2014 5:14 AM
>To: loopantennas@yahoogroups.com
>Subject: [loopantennas] Searching for a very low noise wideband loop preamp
>
>Loop Antenna News and Information Forum
>
>Low noise preamp for wideband loop
>
>Friends im searching for a very low noise wideband loop preamp,
>is for use in areas with very weak Mw signals, my loop is a 3mt
>diameter wire loop and im testing the preamp with two 2n2222.
>
>this preamp have noise in order the signals i want to receive, the
>preamp can receive it, but adding a strong noise floor
>

I just uploaded a revised version of my sketches of low-voltage active antenna amplifiers into the group files section:

Active Antenna Amplifiers for Low Voltage Operation RevA.pdf

They are oriented towards 1.5V applications, but can be used at higher voltages. The first two schematics require that the transistors be parts of a monolithic array, such as the CA3046 or HFE3046. The third schamatic includes feedback for correcting the imbalance when using unmatched transistors, such as individual 2N2222s.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10384. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-09 16:37:28 UTC
From: Richard (Rick) Karlquist
Topic: 10375 Message: 10384

On 1/9/2014 8:18 AM, Horacio Nigro wrote:
> http://www.ebay.com/itm/LNA-UKW-FM-RADIO-88-108-MHZ-VHF-3M-4M-super-low-noise-amplifier-NF-0-4dB-18dB-/111249275393?pt=LH_DefaultDomain_0&hash=item19e6f93a01.
>
> 73
>
> Horacio
> Uruguay
>

This is almost certainly uses an ephemt device.
They are great ... above 50 MHz. At HF and
below, they have fatal 1/f noise.

Rick N6RK

10385. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-09 16:47:35 UTC
From: Todd Roberts
Topic: 10378 Message: 10385

I agree with Brian, I have had excellent results with the M0AYF broadband loop design. Easy to build, uses only 2 transistors, unconditionally stable. Many people have reported it works very well for them. Much less expensive to build your own versus the Wellbrook or Pixel loops.

73, Todd WD4NGG

-----Original Message-----
From: brian nsl <brian.nsl@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Wed, Jan 8, 2014 3:16 pm
Subject: Fw: [loopantennas] Searching for a very low noise wideband loop preamp

☐
Jose,
I would recommend that you look at this loop antenna out of interest.

A Wide Bandwidth Active Loop Receiving Antenna. - QSL.net

www.qsl.net/m0ayf/active-loop-receiving-antenna.html☐

Broad Bandwidth Loop Antenna. ... The best performing receive antenna tested was an

active loop design by John (G8CQX) upon which my .... 73,s. Des (M0AYF)

☐Circuit details and ... - ☐Loop amplifier schematic. - ☐The loop amplifiers "power ...

There are many ' imitations ' around but it does really work and is cheap to build.
Good luck with your project.
Regards for 2014,
72, Brian, GØNSL.

----- Original Message -----

From: Jose A. Kucher

To: loopantennas@yahoogroups.com

Sent: Wednesday, January 08, 2014 12:14 PM

Subject: [loopantennas] Searching for a very low noise wideband loop preamp

10386. Re: [loopantennas] Searching for a very low noise wideband loop preamp

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-09 20:03:48 UTC
From: Horacio Nigro
Topic: 10378 Message: 10386

You were right. My mistake. But with José I was talking about an amplifying device for FM, it was in another YG reflector, and I mixed-up things. Sorry. HI!.

Horacio

2014/1/9 Todd Roberts <toddroberts2001@...>

>
>
> I agree with Brian, I have had excellent results with the M0AYF broadband
> loop design.
> Easy to build, uses only 2 transistors, unconditionally stable. Many
> people have
> reported it works very well for them. Much less expensive to build your
> own versus
> the Wellbrook or Pixel loops.
>
> 73, Todd WD4NGG
> -----Original Message-----
> From: brian nsl <brian.nsl@btinternet.com>
> To: loopantennas <loopantennas@yahoogroups.com>
> Sent: Wed, Jan 8, 2014 3:16 pm
> Subject: Fw: [loopantennas] Searching for a very low noise wideband loop
> preamp
>
>
> *Jose,*
> * I would recommend that you look at this loop antenna out of
> interest.*
>
>
> 1. A Wide Bandwidth Active *Loop* Receiving *Antenna*. -
QSL.net<http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html>
> www.qsl.net/*m0ayf*/active-*loop*-receiving-*antenna*.html
>
> <https://www.google.co.uk/search?client=opera&q=m0ayf+loop+antenna&sourceid=opera&ie=UTF
-8&oe=UTF-8#>
> Broad Bandwidth *Loop Antenna*. *...* The best performing receive
> antenna tested was an
> 2. active loop design by John (G8CQX) upon which my *....* 73,s.
> Des (*M0AYF*)
> 3. Circuit details and ...<http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html#C
ircuit_details_and_constructional>
> - Loop amplifier schematic.<http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html#
The_loop_amplifier_circuit_diagram_is>

> - The loop amplifiers "power ...<http://www.qsl.net/m0ayf/active-loop-receiving-antenna.
html#The_loop_amplifier_power_down_the_coax>
>
> *There are many ' imitations ' around but it does really work and is cheap
> to build.*
> *Good luck with your project.*
> * Regards for 2014,*
> * 72, Brian, GØNSL.*
>
> ----- Original Message -----
> *From:* Jose A. Kucher <saguillar@...>
> *To:* loopantennas@yahoogroups.com
> *Sent:* Wednesday, January 08, 2014 12:14 PM
> *Subject:* [loopantennas] Searching for a very low noise wideband loop
> preamp
>
>
>
>
>

10387. Questions from the archive and files section.

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-10 02:07:57 UTC
From: Ben Hall
Topic: 10378 Message: 10387

Good evening all,

I'm kind of new here so I have been been reading some of the posts in the online Yahoogroups archive.

I recently built a Mobius loop per Chris Trask's instructions in "Mastering the Art of Shielded Loop Aerials." It works *very* well with the remote varactor tuning, but I would like to try it with a pre-amp in a broadband fashion.

My interest in the loop is to try my hand at receiving LOWFERS, NDB's, and some of the transmissions around 500 kHz.

In reading the archives, I'm trying to find more information on two topics.

First, a post makes reference to a "modified M0AYF amp." In another message there is the statement "Guys, I found that this modified M0AYF amp works much better than the IZ1AG (LZ1AQ?) amp."

I think there was a link that originally followed, but thanks to the awful new Yahoogroups interface I believe it has been stripped out.

Please forgive me if this is easy to find in the archives. I about went mad searching the archives online, I would search for a topic, get a return that looked promising, click on the message and the message loaded was absolutely NOT the same message in the search results! (Thank you Yahoo...)

So...can someone please point me towards the modified M0AYF amplifier?

Second, reading Everett Sharp's (N8CNP) article in the files section on building and evaluating broadband active loops, there is a mention of a modified Kits and Parts Wideband RF Amplifier.

I'm not clear on two things:

- Is the amp fed from the loop via the 1:2 matching transformer?

- Was the Kits and Parts amplifier evaluated on the Mobius loop?

If yes, what was the ground on the pre-amp connected to? I understand in the shielded coax loop it was connected to the shield, but in the Mobius configuration, due to the cross-over at the top of the loop, what is the equivalent of the shield braid?

(Also, if Everett reads this message...my grandmother's maiden name is Sharp, with the story that when her parents came to America, it was changed to Sharp from Skorupski so they would sound more American. If

this strikes a bell, we're probably related.)

thanks much and 73,
ben, kd5byb

10388. RE: [loopantennas] Questions from the archive and files section.

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-10 15:00:27 UTC
From: dx11
Topic: 10378 Message: 10388

Hello Ben,
In your recent mail you asked:

"So...can someone please point me towards the modified M0AYF amplifier? "

Well the schematic shown in Everett Sharp's mails is the modified M0AYF. You can find the original in:
http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html

Cor Beijersbergen

10389. ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-11 22:35:14 UTC
From: <dannibou@...>
Topic: 9604 Message: 10389

Hi group. I have some ferrite of different size and color. I know that some are better for low frequency and other for high frequency. I would like to know how to identify them. Anyone know on how I can do this? Thanks
Danny

10390. RE: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-12 00:57:13 UTC
From: <kc9q@...>
Topic: 9604 Message: 10390

Hi Danny,

Here is a link to a core calculator application:
http://www.dl5swb.de/html/mini_ring_core_calculator.htm
http://www.dl5swb.de/html/mini_ring_core_calculator.htm

Go to the Iron Powder Torrid TAB. Then select the Material Button (right of the Core Size (i.e. T50). As you change the Core Material the applicable frequency band will show to the right in the Frequency Range box. Also the color code will change according the to Core Material, and at some point the color code will go from a single color to a dual color band.. You'll also get more information about your core with this app. (Note: For transmitter applications Ferrite Core are preferred. Iron Powder are OK for receive only applications, IMHO).

73,
Mike< KC9Q

10391. RE: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-12 01:11:15 UTC
From: <kc9q@...>
Topic: 9604 Message: 10391

Danny,

I added a link fir the mini Core Calculator app in the Links folder under the ferrites sub folder. Tab to the Iron Powder Torrid menu, and then select different Core Materials. This will provide you with the different color codes and Frequency Ranges.

Mike, KC9Q

10392. Re: [loopantennas] ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-13 01:28:48 UTC
From: Mike N9LSD
Topic: 9604 Message: 10392

the colors are indexed and the data is proably on the mfrs. webpage
---
On Sat, Jan 11, 2014 5:35 PM EST dannibou@... wrote:

>Hi group. I have some ferrite of different size and color. I know that some are better for low frequency and other for high frequency. I would like to know how to identify them. Anyone know on how I can do this? Thanks
> Danny

10393. Butterfly Capacitor for a homebrew loop antenna VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-12 21:26:34 UTC
From: <pop_vasile@...>
Topic: 10393 Message: 10393

I can build for u any air variable capacitors

http://www.flickr.com/photos/93005502@N08/page3/
https://www.youtube.com/watch?v=PVGZryuLwQ0

Variable Butterfly Capacitor for a Homebrew Magnetic Loop Antena

This capacitor has a 65pF to 260pF.
11"x3.75"x3.75",20 sets of 3"OD rotor
I produce this blades using a CNC machine.

BUTTERFLY CAPACITOR FOR YOURS MAGNETIC LOOP ANTENNA VA6POP

I have available for ham radio

3" OD ROTOR + 2 STATOR PLATES $ 5.00
4" OD ROTOR + 2 STATOR PLATES $ 6.50
5" OD ROTOR + 2 STATOR PLATES $ 7.75
6" OD ROTOR + 2 STATOR PLATES $ 8.75
8" OD ROTOR + 2 STATOR PLATES $ 10.50
10" OD ROTOR + 2 STATOR PLATES $ 14.00

73 de VA6POP
yo5bzz(at)gmail.com

10394. Re: [loopantennas] ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-13 17:03:51 UTC
From: <dannibou@...>
Topic: 9604 Message: 10394

Thanks for the info. I'll take a look at this.
Danny

10395. Horizontal Loop Antenna For Digital TV

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-14 04:50:56 UTC
From: <gregella53@...>
Topic: 10395 Message: 10395

I was recently reviewing online designs for homemade DTV antennas. Most of these designs are for UHF (channel 14 and up) and are of the general design of multiple V dipoles with a phasing line, in front of a reflector screen. These antennas are directional, and have to be aimed at the transmitting tower. In my particular location, rural open space with no multipath problems, I wanted an omnidirectional antenna (or at least one with 180 degree coverage) that covered VHF high 174 MHz up through UHF.

Searching through Internet postings for omnidirectional DTV antennas, I found a couple of descriptions for horizontal loop antennas. THese have been constructed of 1/2 or 3/8 inch copper tubing, in a horizontal loop of about 26 inch diameter, feeding a standard television 300 to 75 ohm balun and coax cable. They are typically supported with a horizontal PVC cross and mounted outside on a roof. In one design the loop is a complete circle except for a gap at the feed point. In another design there is also a gap 180 degrees across from the feed point.

I tested this design by picking up a slightly damaged aluminum bicycle rim (about 22 inches diameter) for two dollars at a used bike shop. I cut out a one inch gap and attached a balun transformer with two screws through existing spoke holes. I tried this antenna indoors horizontally on a table next to a large window, and picked up 14 digital channels, both VHF and UHF. Based upon the signal strength meter in the TV, this antenna was omnidirectional on some stations, and semidirectional on others. On those channels where there was some directionality, it seemed to favor the feed end of the loop. It still had a wide beam width on these channels, though.

I made a second horizontal loop out of heavy wire so I could test the effect of a gap 180 degrees from the feed point. This increased the signal strength on some channels, but caused me to lose other channels, so I only got 11 instead of 14.

The aluminum bicycle rim is cheap, rigid, rustproof and easy to come by. It will be easy to mount horizontally outdoors, where I expect it to perform even better. This might be a good platform for other loop antenna projects as well.

DTV receivers do not handle multipath well, so this would probably not be the best antenna in an urban environment, but for a more open area with various towers in different directions, it seems to work well.

10396. Re: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-13 15:52:41 UTC
From: Dave Hartman
Topic: 9604 Message: 10396

```
See if one these sites help you:
http://toroids.info/
http://www.dl5swb.de/html/mini_ring_core_calculator.htm
73 Dave - AC2GL
```

10397. RE: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-13 16:48:20 UTC
From: <grandbill59@...>
Topic: 9604 Message: 10397

Hi,
I think this chart could be usefull.
the file is uploaded in the "files" section of the group.= caractéristiques tores ferrite xxxx .pdf

73
Patrick
http://f1.grp.yahoofs.com/v2/lBfUUsX54ZdtPA76L_0f8FSf8FtkSXVr3BwQ45KcQU6L_5acQik4B9krTFPtVfwoi6yScpM6NeTxcaNVuAAHLC6fcpWF7EmdWKSO0ntku1AlCHahnr_g-s7Ypwf2sglTHLukyAZKkMfeZDpp4YQ8lsvDq_dcZxw74cQ2MOGCzTGSN14DzFMH/caract%C3%A9ristiques%20tores%20ferrite_hftoxxxx.pdf

10398. RE: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-14 14:39:41 UTC
From: <grandbill59@...>
Topic: 9604 Message: 10398

Hi Danny,
i uploaded a file where some features of toroid ferrites are written.
the name is "caracteristiques tores ferrite_hftoxxxx.pdf.
I use it frequently.

http://f1.grp.yahoofs.com/v2/UEvVUrtr49Rl-BA9sSgfDzPRZNVTiNmC-kx824aPC9StuOHqu8pc3FMdx9vlK_gvjxX2wy_2CCY1vixeC_bLYKu8YBvHzgUlfFMm9IkzQKCECgXrjtB5z3nxGolztNAEV4OBLihr-ObCQqNBFO6YjUCN9vgTUtNWe_3UH8iL4ri3e9RK6lGi/caract%C3%A9ristiques%20tores%20ferrite_hftoxxxx.pdf

Patrick F61112

10399. Re: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-15 05:28:00 UTC
From: AlienRelics
Topic: 9604 Message: 10399

You cannot link to a file in that way, Yahoogroups provides a temporary link that only works for 20 minutes at most.

This is a message for all: Please do NOT use high ASCII characters in file names. I cannot make a link to the file now, and I am also unable to change the name or delete it so I can reupload after renaming.

I did finally find a workaround.

In future, please post files with names in English so as to avoid all high ASCII characters, and if it is a file on a website, please post a link rather than uploading it. We have only 100MB of file space. I just had to spend a lot of time cleaning out the Files area on another list.

Here is the company that the PDF came from:
http://www.amidoncorp.com/

Steve Greenfield AE7HD
your friendly but sometimes grumpy neighborhood moderator

--- In loopantennas@yahoogroups.com, <grandbill59@...> wrote:
>
> Hi,
> I think this chart could be usefull.
> the file is uploaded in the "files" section of the group.= caractÃ©ristiques tores ferrite xxxx .pdf
>
> 73
> Patrick
> http://f1.grp.yahoofs.com/v2/lBfUUsX54ZdtPA76L_0f8FSf8FtkSXVr3BwQ45KcQU6L_5acQik4B9krTFPtVfwoi6yScpM6NeTxcaNVuAAHLC6fcpWF7EmdWKSO0ntku1AlCHahnr_g-s7Ypwf2sglTHLukyAZKkMfeZDpp4YQ8lsvDq_dcZxw74cQ2MOGCzTGSN14DzFMH/caract%C3%A9ristiques%20tores%20ferrite_hftoxxxx.pdf
>

10400. Re: ferrite question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-15 05:29:02 UTC
From: AlienRelics
Topic: 9604 Message: 10400

Now -that- is the way to do it. A link does not take up space, and it is available in the Links section for future use.

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, <kc9q@...> wrote:
>
> Danny,
>
>
> I added a link fir the mini Core Calculator app in the Links folder under the ferrites sub folder. Tab to the Iron Powder Torrid menu, and then select different Core Materials. This will provide you with the different color codes and Frequency Ranges.
>
>
> Mike, KC9Q
>

10401. If you don't want to build your own loop antenna...

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-15 23:32:31 UTC
From: <aa2nh@...>
Topic: 10401 Message: 10401

If you don't want to build your own magnetic loop, then here's a company building them in the USA http://AmateurRadioStore.com

10402. RE: 2.5-25KV BUTTERFLY CAPACITOR KITS VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-19 20:14:04 UTC
From: <pop_vasile@...>
Topic: 10288 Message: 10402

I produce this plates using a CNC machine.

https://www.youtube.com/watch?v=PVGZryuLwQ0

I can build http://calgary.kijiji.ca/c-buy-and-sell-electronics-260pF-Variable-Butterfly-Capacitor-for-Magnetic-Loop-Antenna-W0QQAdIdZ560236359# for u any air variable capacitors

Butterfly capacitor,single and split stator capacitor kits,parts

https://www.youtube.com/watch?v=xISBBh5LK7o

http://www.flickr.com/photos/93005502@N08/page3/
https://www.youtube.com/watch?v=PVGZryuLwQ0

Variable Butterfly Capacitor for a Homebrew Magnetic Loop Antena,HF AMPLIFIER,ANTENNA TUNER

BUTTERFLY CAPACITOR FOR YOURS :
-MAGNETIC LOOP ANTENNA,
- KW HF AMPLIFIER,
-ANTENNA TUNER

I have available for ham radio

3" OD 1 ROTOR + 2 STATOR PLATES $ 5.00
4" OD 1 ROTOR + 2 STATOR PLATES $ 6.50
5" OD 1 ROTOR + 2 STATOR PLATES $ 7.75
6" OD 1 ROTOR + 2 STATOR PLATES $ 8.75
8" OD 1 ROTOR + 2 STATOR PLATES $ 10.50
10" OD 1 ROTOR + 2 STATOR PLATES $ 14.00

73 de VA6POP
yo5bzz(at)gmail.com

10403. For Sale: Quantum QX Loop V2.0

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-20 21:03:45 UTC
From: <joe.lanoue@...>
Topic: 10403 Message: 10403

If your not familiar, here is the link to everything: http://www.dxtools.com/QX.htm
http://www.dxtools.com/QX.htm

Never used.

Includes ...
Quantum QX Loop V2.0 with MW Plug-in, Tropical/SW Plug-in, and LW Plug-in
Quantum Q-Stick
Quantum Coupler

Approximately $550 worth for $275 plus shipping from Connecticut.

10404. RE: [loopantennas] For Sale: Quantum QX Loop V2.0

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-20 22:52:45 UTC
From: Gary Saltz
Topic: 10403 Message: 10404

How much to ship to Phoenix? garysaltz@...

Gary

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of joe.lanoue@...
Sent: Monday, January 20, 2014 2:04 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] For Sale: Quantum QX Loop V2.0

If your not familiar, here is the link to everything: http://www.dxtools.com/QX.htm <http://www.dxtools.com/QX.htm>

Never used.

Includes ...
Quantum QX Loop V2.0 with MW Plug-in, Tropical/SW Plug-in, and LW Plug-in
Quantum Q-Stick
Quantum Coupler

Approximately $550 worth for $275 plus shipping from Connecticut.

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2014.0.4259 / Virus Database: 3681/7017 - Release Date: 01/20/14

10405. Cannibalized Super Three Rod

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-23 14:54:17 UTC
From: <dr_seamless@...>
Topic: 10405 Message: 10405

OK. I posted on this a few months ago but cant find original post so I'll do again.

I've got a super three rod mounted in a plastic box. Attached in parallel is an L type attenna tuner like an MFJ. I've wrapped a few more turns around the center of the rod and coupled a trimmer (fixed) cap which I took from the super three board across the output. It resonates proper up to about 1 MegHz but above that tunes only on strong local stations. I'm testing on weak daytime stations and it works well on 910kHz with some added inductance from the antenna tuner but at 1240 it's very weak with no added inductance. I have more trimmer caps of different colors that I can cannibalize from the super 3 board but don't know how to adjust them or what values the colors represent. They look very fragile like an adjustment might break them. The one I'm using now is white. Would adding another trimmer cap across the output move the bandwidth up, or would it lower the freq?

10406. MFJ 1788 SWR readings

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-26 01:26:38 UTC
From: <ve3wdm@...>
Topic: 10406 Message: 10406

I had some odd SWR readings and not sure why, the antenna is not located in an ideal location. I have it on my balcony 6 floors up below are the SWR readings both good and bad.
40m at 7.049 the SWR was 1.8.1 which is great and I have no problem with the results.
30m at 10.132 the SWR was 2.2.1 not great but it's the lowest I could get.

20m at 14.049 the SWR was 11.7.1 and the SWR never moved from this reading and I found this very strange an not sure why?

17m 18.104 the SWR was 1.7.1 and then I moved to another band and when I returned to 17m and same frequency I was not able to turn back to 1.7.1 The SWR was 13.2.1 and never moved just like on 20m.
15m at 21.060 the SWR was 1.1.1 and I have no problem with that.
10m at 28.035 I was not able to get the SWR below 6.4.1 it stayed at this SWR through out the whole tune process.

Not sure why the SWR is behaving this way on 20m, 10m and then once good on 17m and then the same as 20m and 10m with a high SWR and not moving.
Mike
VE3WDM

10407. Re: [loopantennas] MFJ 1788 SWR readings

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-26 05:06:22 UTC
From: Dick Bingham
Topic: 10406 Message: 10407

Hi - Include a picture looking at the building where the antenna is
located. It may give us an idea
of what might be causing your antenna detuning.

73 - Dick/w7wkr

On Sat, Jan 25, 2014 at 5:26 PM, <ve3wdm@...> wrote:

>
>
> I had some odd SWR readings and not sure why, the antenna is not located
> in an ideal location. I have it on my balcony 6 floors up below are the SWR
> readings both good and bad.
> 40m at 7.049 the SWR was 1.8.1 which is great and I have no problem with
> the results.
> 30m at 10.132 the SWR was 2.2.1 not great but it's the lowest I could get.
>
> 20m at 14.049 the SWR was 11.7.1 and the SWR never moved from this reading
> and I found this very strange an not sure why?
>
> 17m 18.104 the SWR was 1.7.1 and then I moved to another band and when I
> returned to 17m and same frequency I was not able to turn back to 1.7.1 The
> SWR was 13.2.1 and never moved just like on 20m.
> 15m at 21.060 the SWR was 1.1.1 and I have no problem with that.
> 10m at 28.035 I was not able to get the SWR below 6.4.1 it stayed at this
> SWR through out the whole tune process.
>
> Not sure why the SWR is behaving this way on 20m, 10m and then once good
> on 17m and then the same as 20m and 10m with a high SWR and not moving.
> Mike
> VE3WDM
>
>
>

--
Dick Bingham - W7WKR
Stehekin, WA CN98pi

OR

East Wenatchee, WA CN97uj

10408. Re: [loopantennas] MFJ 1788 SWR readings

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-26 15:16:29 UTC
From: <ve3wdm@...>
Topic: 10406 Message: 10408

Ok no problem Dick when I am out and about today I can take of pic of the outside of the building where the balcony is located.
Mike

10409. Re: [loopantennas] MFJ 1788 SWR readings

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-26 17:13:34 UTC
From: Dick Bingham
Topic: 10406 Message: 10409

OK, I'll be waiting for the pix. You might include some descriptive-words
that identify anything that might be an interfering conductor. Good luck .
. .

Dick

On Sun, Jan 26, 2014 at 7:16 AM, <ve3wdm@...> wrote:

>
>
> Ok no problem Dick when I am out and about today I can take of pic of the
> outside of the building where the balcony is located.
>
> Mike
>
>
>

--
Dick Bingham - W7WKR
Stehekin, WA CN98pi

OR

East Wenatchee, WA CN97uj

10410. Re: [loopantennas] MFJ 1788 SWR readings

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-26 20:52:55 UTC
From: <ve3wdm@...>
Topic: 10406 Message: 10410

Good evening Dick, I was outside today trying to get a good pic of the building and balcony but the weather was not co-operating. It was snowing so bad that the building really was not usable in the pic. It's now getting dark so will have to wait until tomorrow.
Mike

10411. Re: [loopantennas] MFJ 1788 SWR readings

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-26 21:30:10 UTC
From: dick.bingham
Topic: 10406 Message: 10411

OK, I will wait for a picture to appear !

73 - Dick/w7wkr

> On Jan 26, 2014, at 12:52 PM, <ve3wdm@...> wrote:
>
> Good evening Dick, I was outside today trying to get a good pic of the building and balcony but the weather was not co-operating. It was snowing so bad that the building really was not usable in the pic. It's now getting dark so will have to wait until tomorrow.
> Mike
>
>

10412. Bye-Bye Loop, Hello vertical (for LF & MW). . .

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-27 22:18:47 UTC
From: Phil
Topic: 10412 Message: 10412
Attachments: 1 described; binary payloads are missing from this source WARC

Today I took the 4 foot tunable loop antenna down and am in the process of putting up a "Low Noise Vertical (I hope ;-)

I put the loop up in 2012 as an experiment in the hopes that I could null out interfering beacons and add to my beacon score. It was a big disappointment though. Yes, it did pick up beacons OK, but the nulls were very poor. I first tried connecting the fet pre-amp to the high side of the tuned loop, but for all practical purposes there were no nulls. I suspect that the "antenna effect" of the unbalanced loop, along with environment (just above a sheetmetal roof) was the main problem. Later I disconnected the pre-amp from the high side of the tuned loop and used a single pickup turn to the pre-amp. Yes, there was an impedance mismatch, but that shouldn't have affected nulls, just the gain. The "Q" was high as the varactor tuning was very sharp. . .

Well, that worked better, I could get shallow nulls (around 10dB or so) on some beacons, but not others. Not good enough to sneeze at, or even to actually use the thing as the "active whip" could hear most of the weaker beacons much better.

So today I took it down so that I could install a 30 foot "low noise vertical" (I hope) in it's place. I figured that I'd offer to GIVE the loop to somebody IF they wanted to experiment further with it. Well, that didn't work out! As soon as I lifted it and the rotator off the push-up pole it got away from me and went crashing to the ground some 15 feet down! The result was a crumpled mass of PVC pipe and tangled copper wire. The thing literally came apart at every glued & screwed joint! It landed top side down and the weight of the rotator and metal TV mast probably didn't help preserve it any.

Anyway, after that little escapade I went ahead and installed the vertical section on the top of the Push-up pole. It consists of a Hustler MO-3 mast section (aluminum) with an 80 Meter resonator and stinger mounted on it (I figure that the inductance of the coil MIGHT help a bit). That is mounted on top of about a 7 foot piece of 2 inch PVC pipe, sitting over the top of the push-up pole. There is a 20 foot section of 5 conductor 18ga rotator cable coming down at an angle from the bottom of the Hustler mast to an insulator at the roofline of the mobile home (angled to get it away from the metal push-up pole. The total length is right at 30 feet and gives me a 30 foot vertical above the roof. The matchbox containing the toroid (about 80:6 turns or so) will be mounted right at the roofline and provide the balanced output running into the radio room. The primary side of the toroid will be grounded to an 8 foot ground rod separate from all the station grounds.

Tonight I'll wind the toroids (80:6 antenna section and 1:1 turns in the shack), put them in suitable housings, and hopefully install that tomorrow. I'm to "bushed" to do any more today. At 70 I'm almost too old to be running up and down ladders and shoving those poles way up in the sky, lol!

The toroids I'm using right now. They're "unknowns" from a switching PS, seem to work well at LF, but later I'll purchase a couple of new ones with known characteristics. It won't be too hard to change them out at a later date.

--
73 de Phil, KO6BB
http://www.qsl.net/ko6bb/ (Web Page)

RADIOS:
Grundigs: S-350 (~2006) & G6 (~2011).
Heathkit: GC-1A "Mohican". Analog Solid State (circa 1965).
Icom: R-75 Receiver with 2 Cascaded 250Hz CW Filters.
Icom: R-71A With 500Hz CW filter (circa 1986).
Icom: IC-735 HF Transceiver (circa ~1990).
Radio Shack: DX-380 digital portable (circa ~1990).
Zenith: Royal-7000 Transoceanic Analog Portable (circa ~1969).

ACCESSORIES: Homebrew LF-MF Pre-Amp, MFJ-993B HF Auto-Tuner.
Homebrew 6 Hz Audio Filter.

ANTENNAS: 88' Long Ladder-line fed dipole at 35 feet AGL.
Active Mini-Whip at 36 Feet AGL for LF/MW.
4 Foot/side Tuned Rotatable Loop at 15 Feet AGL for LF

Merced, Central California, 37, 18, 37N 120, 30, 6W CM97rh

10413. Butterfly Capacitor for Magnetic Loop Antenna VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-28 13:23:10 UTC
From: <pop_vasile@...>
Topic: 10413 Message: 10413

I can build for u any air variable capacitors
Butterfly capacitor,single and split stator capacitor kits and parts for ham radio projects

I produce this plates using a CNC machine.

https://www.youtube.com/watch?v=PVGZryuLwQ0

https://www.youtube.com/watch?v=xISBBh5LK7o

http://www.flickr.com/photos/93005502@N08/page3/

https://www.youtube.com/watch?v=PVGZryuLwQ0

BUTTERFLY CAPACITOR FOR YOURS :
-MAGNETIC LOOP ANTENNA,
- KW HF AMPLIFIER,
-ANTENNA TUNER

I have available for ham radio

3" OD 1 ROTOR + 2 STATOR PLATES $ 5.00
4" OD 1 ROTOR + 2 STATOR PLATES $ 6.50
5" OD 1 ROTOR + 2 STATOR PLATES $ 7.75
6" OD 1 ROTOR + 2 STATOR PLATES $ 8.75
8" OD 1 ROTOR + 2 STATOR PLATES $ 10.50
10" OD 1 ROTOR + 2 STATOR PLATES $ 14.00

73 de VA6POP
yo5bzz(at)gmail.com

10414. Re: [loopantennas] Bye-Bye Loop, Hello vertical (for LF & MW). . .

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-28 21:00:33 UTC
From: Mike N9LSD
Topic: 10412 Message: 10414

good luck ! I would like to suggest adding a notch filter..i have one on my old Drake R-4b. It works so well it's my all time favorite reciever. de Mike, N9LSD

10415. Re: [loopantennas] Bye-Bye Loop, Hello vertical (for LF & MW). . .

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-29 03:25:08 UTC
From: Andy
Topic: 10412 Message: 10415

I believe the balance of a small loop antenna is indeed the key to get its figure-8 pattern with the nulls. That, along with the metal roof might explain why yours didn't show any, and why it got at least partial nulls when you changed to a separate coupling loop.

Andy

10416. Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-29 12:26:58 UTC
From: Andy Gardner
Topic: 10416 Message: 10416

Hi Team,

I'd like to try out one of these amplifiers on a 1.8m aluminium loop I have built. Not sure if the designer Chris Trask himself has time to answer questions right now, but I thought I'd put them out on the mailing list in case anyone else could answer as well, and others might be interested in the answers anyway.

The loop I have built has the feed point at the top, and the balance point at the bottom is grounded to earth. It's up that way to get the business end as far up as possible. The bottom part is actually strapped to an alloy pole that is clamped to the centre pole of the old rotary clothesline out the back of the house. Hopefully that's fine, although she who wears the pants isn't totally impressed because it removes the "rotary" function out of the rotary clothesline.

I'm getting fairly good results with the lz1aq amp I have installed at present, but have IMD problems with BCB stations. I'm interested in 0 to 30MHz, so would rather avoid a BCB filter. The plan is to orientate the loop so the 2 local AM BCB transmitter sites are sitting in the null. (~90 deg at 2km and ~60 deg at 5km)

But my feedline I use is a run of Cat 5 ethernet cable, with one pair carrying the signal and the other 3 pairs sharing the +V and 0V load. So I need to reconfigure the amplifier's T6 output transformer for separate power feed, and balanced 100 ohm coming out.

Suggestions gratefully received.

Andy
ZL3AG

10417. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-29 13:18:10 UTC
From: Chris Trask
Topic: 10416 Message: 10417

>
>But my feedline I use is a run of Cat 5 ethernet cable, with one pair carrying the signal and the
>other 3 pairs sharing the +V and 0V load. So I need to reconfigure the amplifier's T6 output
>transformer for separate power feed, and balanced 100 ohm coming out.
>

It's actually fairly simple, and can be accomplished with a few modifications. First, break the connection between T6 and C20, then connect your power line to C6, Q6, etc. to complete the supply connection. Done.

Looking at the output side of T6, break all of the shown connections. The upper terminal of the upper winding is your + output, and the lower end of the lower winding is your - output. Connect the lower end of the upper winging and the upper end of the lower winding to ground. Done.

The collectors of Q3 and Q4 will now see load impedances of 200 ohms instead of the original 400 ohms, so the power gain will be reduced by 6dB.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10418. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-29 13:28:20 UTC
From: Andy Gardner
Topic: 10416 Message: 10418

On 30/01/2014, at 2:18 AM, Chris Trask wrote:

> >
> >But my feedline I use is a run of Cat 5 ethernet cable, with one pair carrying the signal and the
> >other 3 pairs sharing the +V and 0V load. So I need to reconfigure the amplifier's T6 output
> >transformer for separate power feed, and balanced 100 ohm coming out.
> >
>
> It's actually fairly simple, and can be accomplished with a few modifications. First, break the connection between T6 and C20, then connect your power line to C6, Q6, etc. to complete the supply connection. Done.
>
> Looking at the output side of T6, break all of the shown connections. The upper terminal of the upper winding is your + output, and the lower end of the lower winding is your - output. Connect the lower end of the upper winging and the upper end of the lower winding to ground. Done.
>
> The collectors of Q3 and Q4 will now see load impedances of 200 ohms instead of the original 400 ohms, so the power gain will be reduced by 6dB.
>

Thanks Chris!

Hopefully the 6dB reduction won't be too much of a penalty. I would have to go to a different design for T6 to get the gain back?

Cheers,

Andy
ZL3AG

10419. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-29 13:56:49 UTC
From: Chris Trask
Topic: 10416 Message: 10419

>
>> >
>> >But my feedline I use is a run of Cat 5 ethernet cable, with one pair carrying the signal and the
>> >other 3 pairs sharing the +V and 0V load. So I need to reconfigure the amplifier's T6 output
>> >transformer for separate power feed, and balanced 100 ohm coming out.
>> >
>>
>> It's actually fairly simple, and can be accomplished with a few modifications. First, break the connection
>>between T6 and C20, then connect your power line to C6, Q6, etc. to complete the supply connection. Done.
>>
>> Looking at the output side of T6, break all of the shown connections. The upper terminal of the upper
>>winding is your + output, and the lower end of the lower winding is your - output. Connect the lower end of
>>the upper winging and the upper end of the lower winding to ground. Done.
>>
>> The collectors of Q3 and Q4 will now see load impedances of 200 ohms instead of the original 400 ohms, so
>>the power gain will be reduced by 6dB.
>>
>
>Thanks Chris!
>
>Hopefully the 6dB reduction won't be too much of a penalty. I would have to go to a different design for T6 to get the gain back?
>

Not easily and it wouldn't be worth the effort, but you could add an additional 3:2 autotransformer after it that would raise the collector load impedances to 450 ohms, which is reasonably close and would actually raise the gain by about 1.0dB. I don't have a drawing set for that readily available as I've never had to describe one, but it's fairly simple.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10420. Re: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-30 04:49:39 UTC
From: <pop_vasile@...>
Topic: 248 Message: 10420

I can build for u any air variable capacitors
Butterfly capacitor,single and split stator capacitor kits and parts for ham radio projects

This capacitor has a 160pF/15kV

I produce this plates using a CNC machine.

https://www.youtube.com/watch?v=PVGZryuLwQ0

https://www.youtube.com/watch?v=xISBBh5LK7o

http://www.flickr.com/photos/93005502@N08/page3/

https://www.youtube.com/watch?v=PVGZryuLwQ0

Variable Butterfly Capacitor for a Homebrew Magnetic Loop Antena,HF AMPLIFIER,ANTENNA TUNER

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I have available for ham radio

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10" OD 1 ROTOR + 2 STATOR PLATES $ 14.00

73 de VA6POP
yo5bzz(at)gmail.com

10421. Fwd: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-30 07:33:37 UTC
From: Craig F. Simmons
Topic: 248 Message: 10421

What is the lowest capacitance on one of your kits, along with the max. I keep seeing the highest being listed but nothing about the low end. This is important to me because I have one loop that works great on 30 meters and 40 meters but just lacks a going low enough to cover it. Both valuse would be great to know if possible. And yes I know if I make the loop length shorter that will change what is needed. This will make it easy for me to order a few kits. thank you

Date: Thu, Jan 30, 2014 at 7:49 AM
Subject: Re: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!
To: loopantennas@yahoogroups.com

I can build for u any air variable capacitors
Butterfly capacitor,single and split stator capacitor kits and parts for ham radio projects

This capacitor has a 160pF/15kV

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https://www.youtube.com/watch?v=PVGZryuLwQ0

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73 de VA6POP
yo5bzz(at)gmail.com

10422. Fwd: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-30 11:46:01 UTC
From: Craig F. Simmons
Topic: 248 Message: 10422

Correction on wording , sorry.

Date: Thu, Jan 30, 2014 at 10:33 AM
Subject: Fwd: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!
To: loopantennas@yahoogroups.com

What is the lowest capacitance on one of your kits, along with the max. I keep seeing the highest being listed but nothing about the low end. This is important to me because I have one loop that works great on 30 meters and 40 meters but just lacks a going low enough to cover 20 meters. Have minimum and maximum would help to calculate what length and size material will work. Both values would be great to know if possible. And yes I know if I make the loop length shorter that will change what is needed. This will make it easy for me to order a few kits. thank you

Date: Thu, Jan 30, 2014 at 7:49 AM
Subject: Re: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!
To: loopantennas@yahoogroups.com

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Butterfly capacitor,single and split stator capacitor kits and parts for ham radio projects

This capacitor has a 160pF/15kV

I produce this plates using a CNC machine.

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http://www.flickr.com/photos/93005502@N08/page3/

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73 de VA6POP
yo5bzz(at)gmail.com

10423. Fwd: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-01-30 13:19:23 UTC
From: AlienRelics
Topic: 248 Message: 10423

You might want to email him directly.

That is a very good question, BTW.

Steve Greenfield AE7HD

--- In loopantennas@yahoogroups.com, "Craig F. Simmons" <k910dog@...> wrote:
>
> Correction on wording , sorry.
>
> Date: Thu, Jan 30, 2014 at 10:33 AM
> Subject: Fwd: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!
> To: loopantennas@yahoogroups.com
>
>
> What is the lowest capacitance on one of your kits, along with the max. I
> keep seeing the highest being listed but nothing about the low end. This is
> important to me because I have one loop that works great on 30 meters and
> 40 meters but just lacks a going low enough to cover 20 meters. Have
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> will work. Both values would be great to know if possible. And yes I know
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> will make it easy for me to order a few kits. thank you
>
>
>
> Date: Thu, Jan 30, 2014 at 7:49 AM
> Subject: Re: [loopantennas] Re: Homebrew Butterfly capacitor, 12,000 volts!
> To: loopantennas@yahoogroups.com
>
>
>
>
> I can build for u any air variable capacitors
> Butterfly capacitor,single and split stator capacitor kits and parts for
> ham radio projects
>
> This capacitor has a 160pF/15kV
>
>
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> Variable Butterfly Capacitor for a Homebrew Magnetic Loop Antena,HF
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> 10" OD 1 ROTOR + 2 STATOR PLATES $ 14.00
>
> 73 de VA6POP
> yo5bzz(at)gmail.com
>

10424. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-01 12:45:46 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10424

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10425. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-01 12:45:46 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10425

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10426. Question About Tuning Diodes

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-02 02:28:41 UTC
From: <nick.nickrumple@...>
Topic: 10426 Message: 10426

Hi All..... I have a question that I hope someone can help me with. I am planning to build an outdoor remote tuned loop antenna. I have read that you can find tuning diodes in the range of 40 - 700 pF. Does anyone have any experience with such diodes, and if so, where may I find them. Where I live, there are no electronic parts stores, so I will have to order them. Thanks in advance.

Nick Rumple
Kannapolis, North Carolina

10427. Re: [loopantennas] Question About Tuning Diodes

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-02 13:21:27 UTC
From: Chris Trask
Topic: 10426 Message: 10427

>
>Hi All..... I have a question that I hope someone can help me with. I am planning to build an outdoor
>remote tuned loop antenna. I have read that you can find tuning diodes in the range of 40 - 700 pF.
>Does anyone have any experience with such diodes, and if so, where may I find them. Where I live,
>there are no electronic parts stores, so I will have to order them. Thanks in advance.
>

I've done a number of remotely tuned antenna designs and the varactors I like to use have been the MVAM109 and MVAM115. But, those and their direct replacement, the NTE618, are difficult to obtain and pretty expemsive. The 1SV149 is currently available for a very low price in eBay (#200609638692) and has been used by a number of people as a substitute.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10428. Re: [loopantennas] Question About Tuning Diodes

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-02 16:31:37 UTC
From: Andy
Topic: 10426 Message: 10428

Kits and Parts (aka The Toroid King, aka 'Diz') sells the MVAM109:

http://www.kitsandparts.com/parts.php

Andy

10429. Butterfly Capacitor Rotor and Stator Plate Sets VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-03 03:23:32 UTC
From: <pop_vasile@...>
Topic: 10429 Message: 10429

I can build for u any air variable capacitors
Butterfly capacitor http://calgary.kijiji.ca/c-buy-and-sell-electronics-Butterfly-Capacitor-Rotor-and-Stator-Plate-Sets-VA6POP-W0QQAdIdZ563987077# Rotor,Stator Plate Sets
- split stator capacitor kits and parts for ham radio project

I produce this plates using a CNC machine.

https://www.youtube.com/watch?v=PVGZryuLwQ0

https://www.youtube.com/watch?v=xISBBh5LK7o

http://www.flickr.com/photos/93005502@N08/page3/

https://www.youtube.com/watch?v=PVGZryuLwQ0

Variable Butterfly Capacitor kits for a Homebrew:
- Magnetic Loop Antena
- HF AMPLIFIER
- ANTENNA TUNER

I have available for ham radio

3" OD 1 ROTOR + 2 STATOR PLATES $ 5.00
4" OD 1 ROTOR + 2 STATOR PLATES $ 6.50
5" OD 1 ROTOR + 2 STATOR PLATES $ 7.75
6" OD 1 ROTOR + 2 STATOR PLATES $ 8.75
8" OD 1 ROTOR + 2 STATOR PLATES $ 10.50
10" OD 1 ROTOR + 2 STATOR PLATES $ 14.00

73 de VA6POP Calgary,Canada
yo5bzz(at)gmail.com

1403-240-1813

10430. RE: Question About Tuning Diodes

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-03 17:20:05 UTC
From: <wa4qal@...>
Topic: 10426 Message: 10430

Hans Summers has a decent writeup on using power diodes and/or LEDs as varicap diodes:

http://www.hanssummers.com/varicap.html

Dave

10431. Re: [loopantennas] RE: Question About Tuning Diodes

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-03 18:04:20 UTC
From: bubnikv .
Topic: 10426 Message: 10431

I would not use LEDs as varactors. The LEDs act as photodiodes to some extent, generating noise.
It's better to use a zener diode, if you have to.

73, Vojtech OK1IAK

On Mon, Feb 3, 2014 at 6:20 PM, <wa4qal@...> wrote:

>
>
> Hans Summers has a decent writeup on using power diodes and/or LEDs as
> varicap diodes:
>
>
> http://www.hanssummers.com/varicap.html
>
>
> Dave
>
>
>

10432. Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-03 20:05:46 UTC
From: <dstremme@...>
Topic: 10432 Message: 10432

Hello one and all
NEW Member here
Just started working at Pixel Technologies
http://www.pixelsatradio.com

always looking for product feedback, suggestions, etc.
I'm learning the product as I go - willing to provide what assistance I can
and learn from the users what works, what would make it better etc.

Thx in advance
David
KA0IJV

10433. Re: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 00:56:49 UTC
From: Richard Karlquist
Topic: 10432 Message: 10433

On 2014-02-03 12:05, dstremme@... wrote:
> Hello one and all
> NEW Member here
> Just started working at Pixel Technologies
> http://www.pixelsatradio.com
>
> always looking for product feedback, suggestions, etc.
> I'm learning the product as I go - willing to provide what assistance
> I can
> and learn from the users what works, what would make it better etc.
>
> Thx in advance
> David
> KA0IJV

I have a Pixel loop that I want to put at the back of my 20 acres
fed with a 1000 foot length of coax. I tried to ask the factory
about that, and got a confusing answer. You need to address this
issue.

Rick N6RK

10434. Re: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 02:11:57 UTC
From: Todd Roberts
Topic: 10432 Message: 10434

For one thing the Pixel Pro-1B is too expensive. Not a whole lot of hobbyists
want to spend $500 for a receiving loop antenna, myself included. Why does
it have to be so expensive?
73 - Todd WD4NGG

-----Original Message-----
From: dstremme <dstremme@...>
To: loopantennas <loopantennas@yahoogroups.com>
Sent: Mon, Feb 3, 2014 7:17 pm
Subject: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Hello one and all
NEW Member here
Just started working at Pixel Technologies
http://www.pixelsatradio.com

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I'm learning the product as I go - willing to provide what assistance I can
and learn from the users what works, what would make it better etc.

Thx in advance
David
KA0IJV

10435. Re: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 02:45:15 UTC
From: Andy
Topic: 10432 Message: 10435

I came face to face with one of these last week at the local candy store (HRO). Nice looking. Impressive up close.

I should have asked them if they have it hooked up to one of the demo rigs. The online video is one thing, hearing it in person is another.

For me the price would be a real issue. Anyway I'm not in the market for one.

Andy

10436. Re: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 03:15:19 UTC
From: Andy Gardner
Topic: 10432 Message: 10436

Pretty pricey, but if I didn't have DIY skills, I'd certainly be looking at one.

What the use of spending $800 odd dollars on a comms receiver, and feeding a noisy signal into it? You'd be far better off buying one of these and spending less on the radio itself. Unless you enjoy listening to QRM.

As they say - garbage in, garbage out.

ANDY
ZL3AG

On 4/02/2014, at 9:05 AM, <dstremme@...> wrote:

> Hello one and all
> NEW Member here
> Just started working at Pixel Technologies
> http://www.pixelsatradio.com
>
> always looking for product feedback, suggestions, etc.
> I'm learning the product as I go - willing to provide what assistance I can
> and learn from the users what works, what would make it better etc.
>
> Thx in advance
> David
> KA0IJV
>

10437. RE: Butterfly Capacitor Rotor and Stator Plate Sets VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 03:03:52 UTC
From: <kwdgroups@...>
Topic: 10429 Message: 10437

Can you indicate spacings available (for HV rating) and materials available. How long does the typical order take? Thank you

10438. RE: Butterfly Capacitor Rotor and Stator Plate Sets VA6POP

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 03:00:48 UTC
From: <kwdgroups@...>
Topic: 10429 Message: 10438

Hi VA6POP,

Do you have a website where we can order? (I have some questions, if you can send me an email, that will be great.)

Thanks!

Kit AA6AS
kwdgroups@yahoo.com

10439. Re: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 04:17:41 UTC
From: Richard (Rick) Karlquist
Topic: 10432 Message: 10439

On 2/3/2014 6:11 PM, Todd Roberts wrote:
> For one thing the Pixel Pro-1B is too expensive. Not a whole lot of
> hobbyists
> want to spend $500 for a receiving loop antenna, myself included. Why does
> it have to be so expensive?
> 73 - Todd WD4NGG

It comes with a "brick" style amplifier made by Clifton labs.
This is a high quality design with good large signal handling
and a 3 dB NF. Being connectorized, I can use it for other
antennas. I like having it around for a general purpose preamp
for experimenting with other receive antennas. With 30 dB
gain, it can drive my 1000 foot coax line to the back of the
property.

Anyway, the amplifier is worth a fair amount of money in its
own right.

Rick N6RK

10440. RE: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 08:29:47 UTC
From: Dominique Kremp
Topic: 10432 Message: 10440

Hi folks,

Just have a look at this review from Guy Atkins:

http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf

I fully agree with him !

Dominique

Normandy, France

De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de dstremme@...
Envoyé : lundi 3 février 2014 21:06
À : loopantennas@yahoogroups.com
Objet : [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Hello one and all
NEW Member here
Just started working at Pixel Technologies
http://www.pixelsatradio.com

always looking for product feedback, suggestions, etc.
I'm learning the product as I go - willing to provide what assistance I can
and learn from the users what works, what would make it better etc.

Thx in advance
David
KA0IJV

10441. Re: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 11:36:56 UTC
From: Andy Gardner
Topic: 10432 Message: 10441

That was an interesting read. Thanks!

On 4/02/2014, at 9:29 PM, Dominique Kremp wrote:

>
> Hi folks,
>
>
>
> Just have a look at this review from Guy Atkins:
>
> http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf
>
> I fully agree with him !
>
>
>
> Dominique
>
> Normandy, France

10442. Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 12:08:35 UTC
From: John
Topic: 10432 Message: 10442

So, Dominique, you've tried them both and prefer the Wellbrook - or you interpret Guy's data and agree with his conclusion? Go to Pixel's site and you'll find the Pro-1 beats the Wellbrook. I wouldn't expect a commercial site to use an unflattering comparison in their advertising.

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I spent most of $400 on my Pixel simply because I had it - returns from another hobby-item's sale. I don't regret it one bit - it and the R30A - resurrected my longtime hobby. I even got my NRD-525, R8, & HF-150 out of storage and since bought a used R75 and HF-225 - all sharing the Pixel antenna. One minor regret, born from my prior experiences with power outages - no 12V power inserter for battery power. I can remedy that after I find my soldering iron! If you've never tried a decent shielded loop antenna, you need to. Whether you build or buy is up to you.

John

--- In loopantennas@yahoogroups.com, "Dominique Kremp" <dominique.kremp@...> wrote:
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> I fully agree with him !
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> Dominique
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> Normandy, France
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> De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de dstremme@...
> EnvoyÃ© : lundi 3 fÃ©vrier 2014 21:06
> Ã□ : loopantennas@yahoogroups.com
> Objet : [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop
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> Just started working at Pixel Technologies
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> I'm learning the product as I go - willing to provide what assistance I can
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> Thx in advance
> David
> KA0IJV
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10443. Re: [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 12:16:06 UTC
From: Andy Gardner
Topic: 10432 Message: 10443

An antenna? No sir, it's a giant "dream catcher"...

On 5/02/2014, at 1:08 AM, John wrote:

> The new home has a Home Owner's Association - with by-laws prohibiting outside antennas.

10444. RE: [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 13:14:16 UTC
From: Dominique Kremp
Topic: 10432 Message: 10444

Hi John,

Interesting thread indeed !
Yes, I tried them both and then I read Guy's review. My conclusions fully match with his.
My QTH is 12km / 7miles from a LORAN-C transmitter (LESSAY/Normandy/France) which spits out 250kW on 100kHz from a 250m high tower 24 hours a day. Hence, I suffer from considerable antenna/receiver overload and IMD issues.
I've been looking for a long time for receiving antennas which can stand such harsh conditions and can feed my receivers with very clean signals (I think I already tested all existing active and magnetic antennas except those from Rhode & Schwarz - a bit too expensive for me -!).
I had heard that the PIXEL RF Pro-1B is a must in the magnetic antennas world and decided to buy and test one. I compared a brand new PIXEL Pro-1B side by side to my 5 WELLBROOK loops (ALA1530 (2x), ALA100, ALA100M, LFL1010) in early 2103. The WELLBROOK loops ALWAYS were the best ones in terms of sensitivity and especially concerning the S/N, not only in the VLF and NDB band: from 125kHz up to the HF bands no trace at all of the LORAN-C's rattle and no noise, far better S/N ratio on the HF bands than the PIXEL(e.g. constant S3 on 2182kHz with the Pixel, S0 with the WELLBROOK loops) !
I can confirm Guy Atkins conclusions: WELLBROOK beats PIXEL in every configuration ... not only in terms of price !
Like most other Pixel users here in Europe I sold on my RF-Pro-1B after one month use.
Now the last, but not the least: WELLBROOK's boss Andy IKIN is very customers-friendly, he provides help and advices rapidly and at any time !
Nice product and nice after-sales-service: I can only recommend WELLBROOK !
Hope it helps

Dominique
Normandy, France

PS I don't have any connection to this company !

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] De la part de John
Envoyé : mardi 4 février 2014 13:09
À : loopantennas@yahoogroups.com
Objet : [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

So, Dominique, you've tried them both and prefer the Wellbrook - or you interpret Guy's data and agree with his conclusion? Go to Pixel's site and you'll find the Pro-1 beats the Wellbrook. I wouldn't expect a commercial site to use an unflattering comparison in their advertising.

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If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!Yahoo Groups Links

10445. Re: [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 13:16:35 UTC
From: kkyahoo
Topic: 10432 Message: 10445

I think the problem for UK and European users is that the Pixel can cost $700+ landed due to the shipping and the inport duties/tax etc.

Regarding the reviews, the one on the Pixel website compares their loop with the 1530L which is a variant of the standard 1530 designed to work better at lower frequencies rather than high. It does not compare apples with apples.

----- Original Message -----
From: John
To: loopantennas@yahoogroups.com
Sent: Tuesday, February 04, 2014 12:08 PM
Subject: [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

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10446. Re: [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 13:23:20 UTC
From: Jack Smith
Topic: 10432 Message: 10446

Re battery backup of the Pro-1 loops ...

The power coupler supplies 20V DC (nominal) to the coax, and is normally powered with a 24V AC (RMS) transformer. It is possible to replace the transformer with a floating DC source such as a battery, but it will need around 26V DC. A pair of 12V gel-cell batteries in series should work.

One could try a 12V-120V inverter for battery power, but from theoretical considerations it would need to be a sine wave or at least a modified sine wave inverter. And, there is always the electrical noise issue with inverters.

Jack K8ZOA
www.cliftonlaboratories.com

On 2/4/2014 7:08 AM, John wrote:
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10447. RES: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 13:57:52 UTC
From: D Barreira
Topic: 10447 Message: 10447

Huuum! What are you comparing in the pdf review is not really the same antenna…

De: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] Em nome de Dominique Kremp
Enviada em: Tuesday, February 04, 2014 3:30 AM
Para: loopantennas@yahoogroups.com
Assunto: RE: [loopantennas] Pixel-RF-PRO-1B receive magnetic Loop

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I fully agree with him !

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Thx in advance
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This email is free from viruses and malware because avast! Antivirus protection is active.
http://www.avast.com

10448. Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 14:36:02 UTC
From: John
Topic: 10432 Message: 10448

Jack,

Doug Talley of Pixel told me that the amp would work with a dedicated 12V power inserter when I contacted him re the improvements of the 1B loop over my 1A. After sending him pictures of my late 1A and it's amp, he determined it to be the then later variant. I guess my question is simple - will my Pro-1A work with a dedicated 12V negative ground power inserter for 'emergency' - or portable - use? I have appropriately sized diecast cases, connectors, etc, and some 1-10 mH rf chokes rated at several hundred mA, too. I should have taken him up at the time on his free offer - at least I'd no. Perhaps, as the designer of the preamp, Jack, you might comment on the suitability of this. If the bias will be way off - and the gain suffers - perhaps we'll look for a 'Plan B'!

John

--- In loopantennas@...m, Jack Smith <Jack.Smith@...> wrote:
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10449. Re: [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 14:57:07 UTC
From: Jack Smith
Topic: 10432 Message: 10449

John:

The loop amplifier has an on-board 13.8V DC regulator. This has an overhead of 2.2V, typical, 2.7V worst case. If you use the worst case for regulator and overhead plus internal voltage drop in components ahead of the regulator, the MINIMUM DC voltage measured at the output jack on the loop amplifier is 16.8V. As a designer, I have to use the worst case or else risk having some unacceptable level of failure to operate.

If the supply voltage is below this value, correct operation cannot be guaranteed. In the best case with 12V, it will sort of work, but none of the specifications will be met. Maybe that will be OK under some conditions, but the internal voltage regulator will drop out of regulation. The particular regulator used will "try" to maintain the output voltage at 13.8V, but with only 12V on the input, it will obviously fail. When these regulators are operated with lower input voltage than the defined output, they have a 1 to 2V drop, so the loop amp will see 10 or 11V on the internal "regulated" supply rail and as I said all performance data is based on 13.8V, so performance will be degraded.

Jack K8ZOA

On 2/4/2014 9:36 AM, John wrote:
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10450. Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 15:17:10 UTC
From: John
Topic: 10432 Message: 10450

If you need help in deciding between the Pixel and Wellbrook units, consider this; BNC connectors, a la the Wellbrook unit, are not weather-rated and are most often used with RG-58, even premium examples of which do not have 100% shield. RG-6 Quad Shield and it's connectors have 100% shielding and are more reasonably priced - and weatherproof. It won't matter re the weather-rated nature if you use the antenna inside. Still, incomplete shielding in jumper cables can pick up locally generated QRM. For that matter, the poor internal and case shielding of your very radio, like my Palstar R30A, can pickup QRM!

I would suggest reviewing eham reviews of the antennas (Under 'Antennas: HF Vertical and Wire'.) for more unbiased opinions - as well as mine (JRT3) in the Pixel heading(4 pages) - and Guy's (4NRADIO) in both the Pixel and Wellbrook listings (2 pages). He references his comparison, available from the Wellbrook site, and gives the Pixel it's lowest rating of 3/5, the couple of 4/5 ratings highlighting the need for a rotor. The longer running Wellbrook does have fewer reviewers - and many herald the excellent customer service - but they are all 5/5 (The Pixel gets a 4.8/5!), and apparently doen't need the customer service as much. In all seriousness, they are likely very close in performance - and a poor choice cannot be made.

John

10451. Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 15:32:11 UTC
From: John
Topic: 10432 Message: 10451

Jack,

Thank you for your reply. You could have chosen a +10V internal rail - and a 10V regulator - but, no....

Yeah, you probably designed the amp with IM requirements - and high linearity, etc. Phooey! As my 12V 14+ A-Hr backup battery runs 12-13.2V, I guess I'll just have to 'try' it and see. It will be for emergency/loss of power, much less common in my newer home, anyway. Probably time to get out my collection of parts destined for my homebrew remote loops... if I could just find my soldering pencils... I did find my 200W iron... moving isn't fun!

Thanks again!

John

--- In loopantennas@yahoogroups.com, Jack Smith <Jack.Smith@...> wrote:
>
> John:
>
> The loop amplifier has an on-board 13.8V DC regulator. This has an
> overhead of 2.2V, typical, 2.7V worst case. If you use the worst case
> for regulator and overhead plus internal voltage drop in components
> ahead of the regulator, the MINIMUM DC voltage measured at the output
> jack on the loop amplifier is 16.8V. As a designer, I have to use the
> worst case or else risk having some unacceptable level of failure to
> operate.
>
> If the supply voltage is below this value, correct operation cannot be
> guaranteed. In the best case with 12V, it will sort of work, but none of
> the specifications will be met. Maybe that will be OK under some
> conditions, but the internal voltage regulator will drop out of
> regulation. The particular regulator used will "try" to maintain the
> output voltage at 13.8V, but with only 12V on the input, it will
> obviously fail. When these regulators are operated with lower input
> voltage than the defined output, they have a 1 to 2V drop, so the loop
> amp will see 10 or 11V on the internal "regulated" supply rail and as I
> said all performance data is based on 13.8V, so performance will be
> degraded.
>
> Jack K8ZOA
>
>
>
> On 2/4/2014 9:36 AM, John wrote:
> >
> >

> > Jack,
> >
> > Doug Talley of Pixel told me that the amp would work with a dedicated
> > 12V power inserter when I contacted him re the improvements of the 1B
> > loop over my 1A. After sending him pictures of my late 1A and it's
> > amp, he determined it to be the then later variant. I guess my
> > question is simple - will my Pro-1A work with a dedicated 12V negative
> > ground power inserter for 'emergency' - or portable - use? I have
> > appropriately sized diecast cases, connectors, etc, and some 1-10 mH
> > rf chokes rated at several hundred mA, too. I should have taken him up
> > at the time on his free offer - at least I'd no. Perhaps, as the
> > designer of the preamp, Jack, you might comment on the suitability of
> > this. If the bias will be way off - and the gain suffers - perhaps
> > we'll look for a 'Plan B'!
> >
> > John
> >
> > --- In loopantennas@yahoogroups.com, Jack Smith <Jack.Smith@> wrote:
> > >
> > > Re battery backup of the Pro-1 loops ...
> > >
> > > The power coupler supplies 20V DC (nominal) to the coax, and is
> > normally
> > > powered with a 24V AC (RMS) transformer. It is possible to replace the
> > > transformer with a floating DC source such as a battery, but it will
> > > need around 26V DC. A pair of 12V gel-cell batteries in series should
> > > work.
> > >
> > > One could try a 12V-120V inverter for battery power, but from
> > > theoretical considerations it would need to be a sine wave or at
> > least a
> > > modified sine wave inverter. And, there is always the electrical noise
> > > issue with inverters.
> > >
> > > Jack K8ZOA
> > > www.cliftonlaboratories.com
> > >
> > >
> >
> >
> >
>

10452. Re: [loopantennas] Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 15:59:27 UTC
From: Chris Trask
Topic: 10432 Message: 10452

>
>Thank you for your reply. You could have chosen a +10V internal rail - and a 10V regulator - but, no....
>
>Yeah, you probably designed the amp with IM requirements - and high linearity, etc. Phooey! As my 12V 14+
>A-Hr backup battery runs 12-13.2V, I guess I'll just have to 'try' it and see. It will be for emergency/loss
>of power, much less common in my newer home, anyway. Probably time to get out my collection of parts destined
>for my homebrew remote loops... if I could just find my soldering pencils... I did find my 200W iron...
>moving isn't fun!
>

In my design (in the group files section) I chose a 12V supply rail as it was best suited for direct operation from 12V batteries, such as Gel Cells, which would take care of any concerns of power supply induced noise. The biasing of the two stages was selected to give a decent power consumption vs. performance. At HF frequencies the NF performance is secondary to IMD performance due to terrestrial and galactic background noise and the presence of numerous high-power broadcast stations.

The performance of my amplifier exceeds that of Pixel and Wellbrook, having a 2.42dB NF at 10MHz. To get better IMD performance than I attained would require a 2W or more power amplifier, which would at least double the power consumption. Using an older transistor such as the 2N3553 or a newer device such as the NE46134 in the output stage and boosting the biasing current to 100mA or so would do it.

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

10453. test

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 20:03:29 UTC
From: Andrew Ikin
Topic: 10453 Message: 10453

```
The quick brown Fox jumps over the lazy dog
1234567890
```

10454. Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 20:40:55 UTC
From: Andrew Ikin
Topic: 10432 Message: 10454

Chris Trask wrote on Feb 4.

"In my design (in the group files section) I chose a 12V supply rail as it was best suited for direct operation from 12V batteries, such as Gel Cells, which would take care of any concerns of power supply induced noise. The biasing of the two stages was selected to give a decent power consumption vs. performance. At HF frequencies the NF performance is secondary to IMD performance due to terrestrial and galactic background noise and the presence of numerous high-power broadcast stations.

The performance of my amplifier exceeds that of Pixel and Wellbrook, having a 2.42dB NF at 10MHz. To get better IMD performance than I attained would require a 2W or more power amplifier, which would at least double the power consumption. Using an older transistor such as the 2N3553 or a newer device such as the NE46134 in the output stage and boosting the biasing current to 100mA or so would do it.

Chris"

Hello Chris,

Running Pixel loops from a Wellbrook ALA1530 Antenna Interface with a 12V dc supply makes little difference unless you are measuring the IOP3 which only changes by a few dBm.

Concerning your last paragragh which you have repeated many times. I am not aware that any one else in the group has been able to get your design working. The NF of Pixel and Wellbrook loops is in the region of 2dB; so I don't see an issue here. Wellbrooks ALA1530S+ Imperium has a much more impressive IOP3 of +55dBm.

73

Andrew

10455. RE: [loopantennas] test

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 20:55:41 UTC
From: Kjell W. Strom
Topic: 10453 Message: 10455

RYRYRY

From: loopantennas@yahoogroups.com
[mailto:loopantennas@yahoogroups.com] On Behalf Of Andrew Ikin
Sent: 04 February 2014 21:03
To: loopantennas@yahoogroups.com
Subject: [loopantennas] test

The quick brown Fox jumps over the lazy dog
1234567890

10456. Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-04 21:20:17 UTC
From: Andrew Ikin
Topic: 10432 Message: 10456

John wrote on Feb 4,

"If you need help in deciding between the Pixel and Wellbrook units, consider this; BNC connectors, a la the Wellbrook unit, are not weather-rated and are most often used with RG-58, even premium examples of which do not have 100% shield. RG-6 Quad Shield and it's connectors have 100% shielding and are more reasonably priced - and weatherproof. It won't matter re the weather-rated nature if you use the antenna inside. Still, incomplete shielding in jumper cables can pick up locally generated QRM. For that matter, the poor internal and case shielding of your very radio, like my Palstar R30A, can pickup QRM!

I would suggest reviewing eham reviews of the antennas (Under 'Antennas: HF Vertical and Wire'.) for more unbiased opinions - as well as mine (JRT3) in the Pixel heading(4 pages) - and Guy's (4NRADIO) in both the Pixel and Wellbrook listings (2 pages). He references his comparison, available from the Wellbrook site, and gives the Pixel it's lowest rating of 3/5, the couple of 4/5 ratings highlighting the need for a rotor. The longer running Wellbrook does have fewer reviewers - and many herald the excellent customer service - but they are all 5/5 (The Pixel gets a 4.8/5!), and apparently doen't need the customer service as much. In all seriousness, they are likely very close in performance - and a poor choice cannot be made.

John"

Hello John,

Most coaxial connectors are not "weather rated"; they require the user to do this, either by using special tape or in Wellbrook's case using a PVC boot filled with Vaseline; this makes for easy connexion and dis-connexion.

100% shielded cable will have little effect on QRN because of the common mode pick-up with unbalanced cable. If you have an issue with common mode pick-up then the use of common mode chokes and 1:1 isolation transformer at the Rx can help.

Also you need to consider that the system NF is set by the loop antenna amplifier. It highly unlikely that feeder noise pick-up would degrade the antenna, unless this run is very long.

Btw, Guys Atkins a couple years back noticed a noise issue with quad screen cable. We didn't get to the bottom of it, but I surmised that the problem may be to do with the use of dis-similar metals (copper/aluminium) for the screen i.e. any moisture could cause electrolytic reaction resulting in noise voltages.

Kind regards

Andrew

10457. Fw: Wow, Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-05 12:36:36 UTC
From: Andrew Ikin
Topic: 10457 Message: 10457

Below is a message received from Tim last October.

Kind regards

Andrew

----- Original Message -----
From: "Tim Harding" <sgmtim@...>
To: <sales@...>
Sent: Wednesday, October 16, 2013 7:03 PM
Subject: Wow

> Hi,
>
> I ordered your Imperium model and received it yesterday. I Just
> installed it and powered it up for a test run. WOW!! I had a Pixel
> loop and I thought it worked okay, but after testing your antenna there
> is no comparison. Your antenna is much quieter, and appears to be a lot
> more sensitive. With the Pixel I used a noise cancelling speaker and
> with your loop the noising cancelling speaker is not necessary.
>
>
> Your antenna wins hands down!!
>
> Tim Harding
> Greenwood, Indiana
> USA
>
>

10458. RaDAR with an Alpha Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-05 12:59:39 UTC
From: <aa2nh@...>
Topic: 10458 Message: 10458

This is what amateur radio is all about!
https://sparks31.wordpress.com/2014/01/22/on-the-air-hf-low-power-qrp-comms-established/
https://sparks31.wordpress.com/2014/01/22/on-the-air-hf-low-power-qrp-comms-established/

10459. 160 and 75 meter Magnectic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-06 12:18:15 UTC
From: <k910dog@...>
Topic: 10459 Message: 10459

I was wondering how much work has been done and would like to see some discussion on Loop antennas for 75 meter and 160 meter band. I for one have the most trouble with these two bands due things common for most hams. No tall well spaced trees on my property. No huge type antennas, or a way to put up long , very high wires. No huge towers to support any of these either. I would like to reference two web locations that discuss two type of loop antennas that seem to work very well. I plan on making a ground mounted loop antenna for use just for 160 meters and 75 meters made out of 2" aluminum conduit with joints being welded together and a correct size vacuum variable capacitor. see listed links. http://www.bulldogtrust.com/ index12.htm http://www.bulldogtrust.com/index12.htm (3" aluminum tubing 15' transmitting magnetic loop) http://www.standpipe.com/ w2bri/80meter.htm http://www.standpipe.com/w2bri/80meter.htm (80 meter 2" aluminum loop antenna)

10460. Fw: Wow, Re: Pixel-RF-PRO-1B receive magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-06 13:26:52 UTC
From: John
Topic: 10457 Message: 10460

Wow, Andrew, a happy customer - and former Pixel, although he didn't identify the model, owner!

You haven't converted me. I see one possible way... I have a similar spot in my walkup tall attic where I could mount your antenna on a five foot mast in a tripod mount, just like my existing Pixel Pro-1A, which would be ~22-25 feet away and whose loop axis would be in parallel. I'll even measure the RG-6 QS I use to insure they are the same length - except for the BNC/F adapters, which I have. I could then A-B the antennas in 'real time' on a mix of receivers, including a Drake R8, Icom R-75, JRC NRD-525, and Lowe HF-150 & 225. Both would be indoors. Unlike Guy's quantitative comparison on an SDR, mine would be a qualitative comparison. All you have to do is send me one of your antennas - gratis. Should it really best my Pixel, I will publish my findings here, as well as my recipe for the crow I would consume in such an event. Let me know if you need my address.

John

--- In loopantennas@yahoogroups.com, Andrew Ikin <andrew.ikin@...> wrote:
>
> Below is a message received from Tim last October.
>
> Kind regards
>
> Andrew
>
>
> ----- Original Message -----
> From: "Tim Harding" <sgmtim@...>
> To: <sales@...>
> Sent: Wednesday, October 16, 2013 7:03 PM
> Subject: Wow
>
>
> > Hi,
> >
> > I ordered your Imperium model and received it yesterday. I Just
> > installed it and powered it up for a test run. WOW!! I had a Pixel
> > loop and I thought it worked okay, but after testing your antenna there
> > is no comparison. Your antenna is much quieter, and appears to be a lot
> > more sensitive. With the Pixel I used a noise cancelling speaker and
> > with your loop the noising cancelling speaker is not necessary.
> >
> >
> > Your antenna wins hands down!!
> >
> > Tim Harding
> > Greenwood, Indiana

> > USA
> >
> >
>

10461. Pixel Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-06 14:25:39 UTC
From: <kkyahoo@...>
Topic: 10461 Message: 10461

Can any one tell me what the differences are between the Pixel Pro-1A and the 1B?

Thanks

Kevin

10462. Re: [loopantennas] Pixel Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-06 14:59:16 UTC
From: tomdoubts doubting
Topic: 10461 Message: 10462

RF-PRO-1A no longer available - (VERSION-1) of the current RF-PRO-1B
slight design changes - a few other component upgrades - enhancements.

On Thursday, February 6, 2014 7:25 AM, "kkyahoo@..." <kkyahoo@...> wrote:

Can any one tell me what the differences are
between the Pixel Pro-1A and the 1B?

Thanks

Kevin

10463. Re: RaDAR with an Alpha Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-06 16:21:12 UTC
From: Marcus NX5MK
Topic: 10458 Message: 10463
Attachments: 1 described; binary payloads are missing from this source WARC

Several HAMs are using loop antennas nearly daily (especially Greg N4KGL with AlexLoop) and having great success with them.

See his and other posts on the RaDAR group (Rapid Deployment Amateur Radio):
https://plus.google.com/communities/109283065808971118728

I myself just got an Alpha Loop and getting the hang of tuning a loop antenna. First QSO was from Arkansas to England (UK) with 10W SSB. Not bad I'd say :)

If you are interested, join in on the fun and operate your loop /P or /PM, post to the group and maybe even participate in the upcoming contest http://radar-america.blogspot.com if you like a challenge.

vy 73 de Marcus NX5MK
Apparare Scientior Paratus Communicare

10464. Re: RaDAR with an Alpha Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-07 14:23:58 UTC
From: <aa2nh@...>
Topic: 10458 Message: 10464

I just got myself an Alpha Loop not too long ago, and find that tuning to till I hear the loudest noise floor is very easy, then I transmit and get DX results on 10 and even 1 watt! I've only found the Alpha Loop Antenna available for sale in one place though, which is here: https://amateurradiostore.com/all-alpha-antennas-c-2/1540-meter-alpha-loop-tripod-mount-bag-transmit-receive-p-197 https://amateurradiostore.com/all-alpha-antennas-c-2/1540-meter-alpha-loop-tripod-mount-bag-transmit-receive-p-197 Great American Made product! Built to last!

10465. Re: details about the Alpha loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-07 17:24:39 UTC
From: JOHN CEDARHOLM
Topic: 10465 Message: 10465

Yes! Please send the resource links. I think everyone in the group would benefit from the information you are about to share, so I've included them on this email. Also, I just received the following Coupon, just after I mentioned this is something they send out. Pretty timely to our conversation I'd say :)

We're pleased to offer you a Store Coupon
You can redeem this coupon during checkout. Just enter the code in the box provided, and click on the redeem button.
The coupon code is MajorSavings
The coupon is valid between 02/07/2014 and 02/09/2015 - We are offering Free Shipping and combining that with 15% off any purchase of $200 or more. This includes the 6-60 DX-Mil and the extremely popular Alpha Loop Antenna, which is a small Magnetic Loop for 15-40 meters with or without the a field bag & tripod! So Check Out what you can get some big savings on today at the http://AmateurRadioStore.com
73s,
Steve/N0TES Owner Alpha Antenna http://AlphaAntenna.com http://AmateurRadioStore.com
Don't lose the coupon code, make sure to keep the code safe so you can benefit from this special offer.
Visit us at Amateur Radio Store

From:

Craig F. Simmons <k910dog@...>;

To:

<aa2nh@...>;

Subject:

Fwd: details about the Alpha loop

Sent:

Fri, Feb 7, 2014 3:42:25 PM

Hey John check this out and do a search on Google for "aluminum strapping" you will find more places. see link below. If you want i have collected a lot of great web links on KX3 and antenna links, electronics, etc. If you want I will send you a copy. Lot's of great things . 73's Craig

http://www.gltproducts.com/products/2_aluminum_butt_strap/2493

---------- Forwarded message ----------

From: JOHN CEDARHOLM <aa2nh@...>
Date: Fri, Feb 7, 2014 at 6:13 PM
Subject: Re: details about the Alpha loop

To: "Craig F. Simmons" <k910dog@...>

Craig-Not sure what the measurements for the capacitor are, but I know they build them on a CNC milling machine at their shop. The housing that the capacitor is in is buttoned up really well, I mean it has a waterproof seal around the kid and epoxies on the screw heads, etc. Also found out they will be releasing a 100 watt version this summer, as well as a micro-tune version with a 6:1 reducer by May, and eventually they will integrate remote tuning for even a mobile version. I've found they are easy to talk to, but they don't give out any tech data. I think the aluminum strapping is exactly 1/2 inch wide and 1/8 inch thick.
I couldn't find any stock anywhere with those measurements at the 4 major hardware stores. Guess my favorite thing they did with this antenna was make a $249 version available, and if you sign up to receive emails on their site they occasionally
send Free shipping codes out. That's how I got a good deal on mine!

73s!

From:

Craig F. Simmons <k910dog@...>;

To:

<aa2nh@...>;

Subject:

details about the Alpha loop

Sent:

Fri, Feb 7, 2014 2:37:50 PM

If you do not mind can you please share some details about the Alpha Loop. I have gathered together some aluminum strapping and other items and would be really interested in things like the width of the strips used for the loop, what size capacitor they use and the size of the loop and coupling loop too. I have a remote tune one I have built that works good but now, (uses aluminum too) but I am wanting to make one out of copper strips connected together. Thanks so much for the information so far on the group. Soon I am going to add my stuff I have done to the group so we can all benefit from my mistake and success. 73's
Craig Simmons K9TEN

10466. Fwd: [KX3] RE: Fwd: [MagLoop] 160 meter and 75 meter loop antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-08 04:39:30 UTC
From: Craig F. Simmons
Topic: 10466 Message: 10466

Correction, a magnetic loop is Not Too Small for these bands, there is no set size for a magnetic loop antenna. Just like any other antenna, the size is governed by what frequency is being used. A loop made from 2 inch aluminum with a length of 80 feet, 24.1 feet in circumference is smaller than a Yagi or quad loop for 160 meters and it is 63% efficient. Not too bad I think.

Date: Fri, Feb 7, 2014 at 10:13 PM
Subject: [KX3] RE: Fwd: [MagLoop] 160 meter and 75 meter loop antennas?
To: KX3@yahoogroups.com

To small for these bands, but has anyone ever built a loop using one of those spring loaded sun shades for your car as the frame? The sun shades I am talking about are the ones you have to twist into a collapsed figure eight to store. It seems like that would be a very lightweight and compact solution.

10467. RE: 160 and 75 meter Magnectic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-08 14:19:57 UTC
From: <jwin95@...>
Topic: 10459 Message: 10467

This gentleman has a very complete presentation, and discusses the pitfalls and things to be wary of:

http://brisdance.com/vk4amz/LOOP.html

Jim

10468. Loop Antenna Naivete

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-08 12:54:12 UTC
From: Joel Black
Topic: 10468 Message: 10468

I will be purchasing some material from a local ham to build an active receive loop in the near future.

That being said, I also have a KX3. It doesn't get a lot of use; however, I'd like to start this spring taking it to SOTA summits. Here in Alabama, we have *no* SOTA summits above the tree line; therefore, I've been thinking of using wire antennas.

After trying to hear some (not all, but BY, HS, etc.) DX stations after they're posted on the DX cluster and me not being able to hear them, I was put onto a loop antenna.

I also enjoy working QRP.

I was wondering if it would be better to build a homebrew loop antenna and let it pull "double-duty" as a receiving loop and a transmitting loop. Of course, I realize I will lose the preamp if I do that.

Meh, now that I have that written out, I think it would be better to build both.

Thoughts?

73,
Joel - W4JBB

10469. Re: [loopantennas] Loop Antenna Naivete

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-08 17:37:10 UTC
From: Chris Trask
Topic: 10468 Message: 10469

>
>I was wondering if it would be better to build a homebrew loop antenna
>and let it pull "double-duty" as a receiving loop and a transmitting
>loop. Of course, I realize I will lose the preamp if I do that.
>
>Meh, now that I have that written out, I think it would be better to
>build both.
>
>Thoughts?
>

You could use a pair of coaxial relays up on the mast to switch a preamp in and out. Just be sure to short out the preamp input when in the XMT mode.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10470. Re: [loopantennas] Loop Antenna Naivete

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-08 18:03:32 UTC
From: Andy
Topic: 10468 Message: 10470

Some naivete on my part here ... but if the loop antenna is suitable for transmitting, then I'd think it shouldn't need a preamp.

The preamp is helpful when the loop is untuned, and the loss resistance far exceeds the radiation resistance, which make it unsuitable as a transmitting antenna (unless you like doing QRPp). But if you can make a good tuned HF loop with moderately low loss, then skip the preamp.

Andy

10471. re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-09 00:17:06 UTC
From: Hue Miller
Topic: 10471 Message: 10471

Loop Antenna News and Information ForumWith all the forwards on the previous post, it’s kind of unclear who exactly
posted the various messages, but I want to say, “THANK YOU!”
This is just the kind of thing I need – as an apartment dweller for a while longer.
I was ready to order, but I think I’m going to hold off for both the microtune and 100 watt versions which will be offered not too long off.
-Hue Miller K7HUE (Newport, Oregon)

10472. re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-09 04:03:13 UTC
From: <aa2nh@...>
Topic: 10471 Message: 10472

Sign up for their newsletter at https://amateurradiostore.com/
https://amateurradiostore.com/ to get product updates from Alpha Antenna like those I shared. I also was able to preorder the QRP MicroTune Loop, and of course pre-pay for it. It was $50 more than the standard Alpha Loop. Don't look for the 100 watt version for awhile, perhaps a long while.

10473. Re: 160 and 75 meter Magnectic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-09 13:28:05 UTC
From: phil_m6mrp
Topic: 10459 Message: 10473

Nice read with plenty of info, been reading up on mag loops for quite a while now and never come across that site, thanks for posting the link very interesting indeed, would love to have a loop of that size but think it would create some serious problems with the local anti radio/antenna brigade I have surrounding me so a loft mounted frame antenna loop for 40 and 80 will be the next project, 160 will just have to wait worst luck.
Phil
M6MRP

--- In loopantennas@yahoogroups.com, <jwin95@...> wrote:
>
>
> This gentleman has a very complete presentation, and discusses the pitfalls and things to be wary of:
>
>
> http://brisdance.com/vk4amz/LOOP.html
>
>
>
>
>
> Jim
>

10474. re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-09 14:20:39 UTC
From: <aa2nh@...>
Topic: 10471 Message: 10474

Here's the link to pre-order the MicroTune Loop from Alpha Antenna: https://amateurradiostore.com/all-alpha-antennas-c-2/preorder-1540-meter-alpha-microtune-loop-tripod-mount-bag-p-282 https://amateurradiostore.com/all-alpha-antennas-c-2/preorder-1540-meter-alpha-microtune-loop-tripod-mount-bag-p-282

10475. RE: Question About Tuning Diodes

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-10 22:25:13 UTC
From: <n3ikq@...>
Topic: 10426 Message: 10475

I got mine on eBay. Sometimes you can get 10 MVAN109 tuning diodes for $10 from a guy that goes by username twisttwinkle. Have fun they are fun to use! I got a lot of good info from this link: http://randombio.com/loopantenna.html, I used his design (in pairs) with success. http://myworld.ebay.com/twisttwinkel?_trksid=p2047675.l2559

10476. RE: Loop Antenna Naivete

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-10 22:45:16 UTC
From: <n3ikq@...>
Topic: 10468 Message: 10476

The transmitting loop will have a very sharp resonance when tuned to your frequency. It will act as a good pre-selector. In fact, you can tune your loop by listening for an increase in noise as you turn the cap. If you need more signal on receive, why not just throw out a length of wire? Very cheap, very portable. Only the transmitter needs a good VSWR match to be happy. You would just need a TR switch of some kind. Remember the old adage: 'anything less than a true dipole at least 1/4 wave above ground is going to be a compromise". That being said, an inefficient loop that is portable and easy to deploy is better than no antenna at all! I got a lot of good information about loops here: http://www.nonstopsystems.com/radio/frank_radio_antenna_magloop.htm, Frank is a very avid experimenter and nice guy if you want to contact him with a question.

10477. re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-10 22:17:15 UTC
From: <n3ikq@...>
Topic: 10471 Message: 10477

I don't know man, "specially selected aluminum alloy that has particular chemical properties and physical dimensions" seems a little snake oilish to me (for the price). The most important aspect that effects the efficiency of these antennas is 1. Resistance 2. Resistance 3. Resistance! The junction between the cap and the loop MUST be as low as possible. Some manufacturers apparently weld theirs to minimize R. You may also check out: http://www.nonstopsystems.com/radio/frank_radio_antenna_magloop.htm for a lot of great DIY information on building your own if you are so inclined. I have no idea if the new loop is any better than other loops that have been around for years. There may well be other reasons that make it a superior product. The only way to tell for sure is an honest to goodness "shootout" between competitors. I'm just always a little skeptical of unreferenced claims. The physics of these antennas have not changed since they were first put into service many many decades ago.

10478. re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-11 14:51:51 UTC
From: <aa2nh@...>
Topic: 10471 Message: 10478

Loved your point about resistance, resistance, resistance so much that I called Alpha Antenna to ask them what the correlation between the chemical properties of their specially selected aluminum had to do wth resistance. The answer was so simple, the softer the aluminum the less resistance. They refered me to a sheet on the resistance in different metals. For example the resistance is high when an antenna is made out of stainless steel, because the metal is so dense or hard. Many other metals were listed and of course copper being pliable and a softer metal made it have low resistance as was the case with gold and other softer metals. So basically, Alpha Antenna has chosen a softer form of aluminum based upon chemical properties to lower resistance. Seems there's a lot of information online about this. I hadn't thought of it before, but it just makes sense.

10479. re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-11 15:26:05 UTC
From: <aa2nh@...>
Topic: 10471 Message: 10479

Here are a couple of links I found right away:
http://www.tibtech.com/conductivity.php http://www.tibtech.com/conductivity.php

http://personal.ee.surrey.ac.uk/Personal/D.Jefferies/antennexarticles/newantennexarticles/efficiency.pdf http://personal.ee.surrey.ac.uk/Personal/D.Jefferies/antennexarticles/newantennexarticles/efficiency.pdf

I also notice that after my phone call to Alpha Antenna, they clarified why a softer aluminum was chosen, as well as why brass is used at the coaxial connection points, on their Loop. Which is of course to lower resistance by using the metals with the highest conductivity.

10480. Re: [loopantennas] re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-11 15:39:53 UTC
From: tomdoubts doubting
Topic: 10471 Message: 10480

ANYONE PLAYED with a RX only Loop?

Feedback - (Curious) about the Pixel RF-PRO-1B 36" Rx only Magnetic Loop..

On Tuesday, February 11, 2014 8:26 AM, "aa2nh@..." <aa2nh@...> wrote:

Here are a couple of links I found right away:
http://www.tibtech.com/conductivity.php

http://personal.ee.surrey.ac.uk/Personal/D.Jefferies/antennexarticles/newantennexarticles/efficiency.pdf

I also notice that after my phone call to Alpha Antenna, they clarified why a softer aluminum was chosen, as well as why brass is used at the coaxial connection points, on their Loop. Which is of course to lower resistance by using the metals with the highest conductivity.

10481. Re: [loopantennas] re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-11 15:40:53 UTC
From: tomdoubts doubting
Topic: 10471 Message: 10481

forgot the link
http://www.pixelsatradio.com/product/shortwave-magnetic-loop-antenna/

On , tomdoubts doubting <dstremme@...> wrote:

ANYONE PLAYED with a RX only Loop?

Feedback - (Curious) about the Pixel RF-PRO-1B 36" Rx only Magnetic Loop..

On Tuesday, February 11, 2014 8:26 AM, "aa2nh@..." <aa2nh@...> wrote:

Here are a couple of links I found right away:
http://www.tibtech.com/conductivity.php

http://personal.ee.surrey.ac.uk/Personal/D.Jefferies/antennexarticles/newantennexarticles/efficiency.pdf

I also notice that after my phone call to Alpha Antenna, they clarified why a softer aluminum was chosen, as well as why brass is used at the coaxial connection points, on their Loop. Which is of course to lower resistance by using the metals with the highest conductivity.

10482. Re: [loopantennas] re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-11 20:31:46 UTC
From: Andy Gardner
Topic: 10471 Message: 10482

On 12/02/2014, at 4:26 AM, <aa2nh@...> <aa2nh@...> wrote:

>
> Here are a couple of links I found right away:
>
> http://www.tibtech.com/conductivity.php
>
> http://personal.ee.surrey.ac.uk/Personal/D.Jefferies/antennexarticles/newantennexarticles/efficiency.pdf
>
>
>
> I also notice that after my phone call to Alpha Antenna, they clarified why a softer aluminum was chosen, as well as why brass is used at the coaxial connection points, on their Loop. Which is of course to lower resistance by using the metals with the highest conductivity.
>

Silver isn't particularly soft and brass isn't that hot in the conductivity stakes.

And we're not discussing pure aluminium, we're talking aluminium alloys.

It's all a negotiation between conductivity, strength, workability, cost of materials, corrosion resistance, frequency (skin effect) etc.

10483. Re: [loopantennas] re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-12 15:32:51 UTC
From: <aa2nh@...>
Topic: 10471 Message: 10483

Is the reason that coax is worse than soft aluminum (not rigid aluminum) to build a magnetic loop antenna from because there are thousands of lossy connection points as the braid of the coax weaves itself inside the sheath of the coax? If so, I can understand why a loop with just a few connection points around it would have less resistance than a braid with thousands of connection points. That's the only explanation I can come up with that explains why resistance is less and the skin effect is more on soft aluminum vs braded coax.

10484. Re: [loopantennas] re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-12 18:48:25 UTC
From: <gregella53@...>
Topic: 10471 Message: 10484

I bought a Pixel RF-PRO-1B a couple of months ago and put it up on my roof. I use it with a QS1R software defined radio. I am very happy with it. For me, it works as well as a resonant dipole at any particular frequency, but it does this from below 500 KHz to over 30 MHz. Also, it can be rotated if needed to null out a noise source. If you are only going to have one antenna to monitor the whole HF/MF band, get this.

Greg Ella
Ft. Collins, CO

10485. Measuring very small AC resistances

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-13 03:34:16 UTC
From: John Maxwell
Topic: 10485 Message: 10485

I was perusing Chris Trask / N7ZWYChris Trask's paper "A Simple Varactor-Tuned Loop Antenna Matching Network", wherein he makes the sensible statement "...and the designer should always rely to measured data, especially when designing matching networks."

And it occurred to me: I have no idea how to measure _any_ AC resistance (as distinct from impedance), let alone the sub-ohm values he's talking about in that context.

A few minutes work with Google turned up this:

http://www.tnlc.ncsu.edu/files/testing/manuals/ImpedanceMeasurementHandbookRev3.pdf

which looks to be a decent introduction to the subject; I'm digesting it now, but I thought I'd ask if anyone has any advice/pointers/lore on the subject.

So?

-John

--
John Maxwell KB3VLL jmax@...

Sufficiently advanced incompetence is indistinguishable from malice.

10486. Re: [loopantennas] Measuring very small AC resistances

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-13 06:54:14 UTC
From: Richard (Rick) Karlquist
Topic: 10485 Message: 10486

On 2/12/2014 7:34 PM, John Maxwell wrote:

> And it occurred to me: I have no idea how to measure _any_ AC
> resistance (as distinct from impedance), let alone the sub-ohm values
> he's talking about in that context.
>
> A few minutes work with Google turned up this:
>
> http://www.tnlc.ncsu.edu/files/testing/manuals/ImpedanceMeasurementHandbookRev3.pdf
>
> which looks to be a decent introduction to the subject; I'm digesting
> it now, but I thought I'd ask if anyone has any advice/pointers/lore on
> the subject.

Forget about this handbook. What you want to do to
measure a low impedance is to use a TWO port network
analyzer (not a one port NA or an impedance analyzer)
and connect the ports to an SMA tee. Connect your DUT
at the third port of the SMA tee. By measuring S21,
it is possible to work backwards and calculate the
impedance on the 3rd port. This technique works
down to extremely low impedances. In some cases,
you may want to replace the SMA tee with a more
precision fixture that puts the DUT in shunt with
a through line.

Full disclosure: I work for Agilent doing advanced network
analyzer R&D...

until March 14, when I will be retiring.

Rick Karlquist N6RK

10487. Loop Antenna Balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-14 18:12:47 UTC
From: <hmholden69@...>
Topic: 10487 Message: 10487

I live in an area that has HOA rules against outdoor sw antennas. I think my best bet is a stealth loop antenna laid directly on the roof. It would be trapezoidal in shape and about 100 feet long. I want to feed the receiver with small coax {RG 174}. I want to make a balun on a ferrite rod or air core type. I have some torrid cores but go crazy trying to wind them. Any ideas on the ratio I need {4:!, 9:1, etc} and a place to get plans for winding.This will be a receive only antenna.

Harry

10488. Re: [loopantennas] Loop Antenna Balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-15 02:03:06 UTC
From: Richard (Rick) Karlquist
Topic: 10487 Message: 10488

A 100 foot long receive loop makes no sense. Receive loops
need to be less than 1/3 wavelength at the highest frequency,
which would limit you to 3 MHz. You should probably be looking
at a Pixel or Wellbrook loop, 3 foot diameter. You should
be able to deploy that even in an HOA.

Rick N6RK

On 2/14/2014 10:12 AM, hmholden69@... wrote:
> I live in an area that has HOA rules against outdoor sw antennas. I
> think my best bet is a stealth loop antenna laid directly on the roof.
> It would be trapezoidal in shape and about 100 feet long. I want to feed
> the receiver with small coax {RG 174}. I want to make a balun on a
> ferrite rod or air core type. I have some torrid cores but go crazy
> trying to wind them. Any ideas on the ratio I need {4:!, 9:1, etc} and a
> place to get plans for winding.This will be a receive only antenna.
>
> Harry
>
>

10489. RE: Loop Antenna Naivete

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-15 04:04:24 UTC
From: <aa2nh@...>
Topic: 10468 Message: 10489

It is fascinating that I would compare any antenna, except in an antenna shoutout, to a loop. I find that fascinating because no where in the design of a small Magnetic Loop Antenna will you find the formula used on the other antenna systems used (i.e. 468/frequency mhz). When an MLA is tuned, for the RECEIVE side there is indeed an increase in the noise floor, a VERY big increase. To say that the receiver does not benefit from a lower SWR is wrong. Also wrong is that the loop is anything but inefficient, rather the efficiency of a loop is higher than other wide band antennas like a dipole. Isn't it true that the effective radiated power is greater from a loop than a traditional dipole?

10490. Re: [loopantennas] Loop Antenna Balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-15 04:27:52 UTC
From: vk2tti@...
Topic: 10487 Message: 10490

Harry, I have used an untuned loop about 90 feet circumference (a two turn loop sides 6 metres x 2 metres, hung under the eaves at this QTH.) The plane of the loop North/South used it to listen to the Sydney Hobart Yacht race. Armchair copy, you could almost swell the salt air! Positioning it on the roof may make it susceptable to mains bourne QRN. Could you position it under the eaves of the building. Am not sure what a HOA is. Give it a go, temporarily at first, if it's OK make it permanent. Tuned loops need to be say 1/3 to1/4 wavelength and brought to resonance capacitivly. An untuned loop will have a basic resonance derived from its native inductance and capacitance. Again give it a go. Regards Max VK2TTI

----- Original Message -----
From: loopantennas@yahoogroups.com
To:
Cc:
Sent:Fri, 14 Feb 2014 18:03:06 -0800
Subject:Re: [loopantennas] Loop Antenna Balun

A 100 foot long receive loop makes no sense. Receive loops need to be less than 1/3 wavelength at the highest frequency, which would limit you to 3 MHz. You should probably be looking at a Pixel or Wellbrook loop, 3 foot diameter. You should be able to deploy that even in an HOA.

Rick N6RK

On 2/14/2014 10:12 AM, hmholden69@... wrote:
> I live in an area that has HOA rules against outdoor sw antennas. I
> think my best bet is a stealth loop antenna laid directly on the roof.
> It would be trapezoidal in shape and about 100 feet long. I want to feed
> the receiver with small coax {RG 174}. I want to make a balun on a
> ferrite rod or air core type. I have some torrid cores but go crazy
> trying to wind them. Any ideas on the ratio I need {4:!, 9:1, etc} and a
> place to get plans for winding.This will be a receive only antenna.
>
> Harry
>
>

Email sent using Optus Webmail

Links:
---
[1]
http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJyYnZlYmNyBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDQ4OARzZWMDZnRyBHNsawNycGx5BHN0aW1lAzEzOTI0Mjk3ODg-?act=reply&messageNum=10488
[2]
mailto:richard@...?subject=Re%3A%20%5Bloopantennas%5D%20Loop%20Antenna%20Balun
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Loop%20Antenna%20Balun
[4]
http://groups.yahoo.com/group/loopantennas/post;_ylc=X3oDMTJmZTdxZ20wBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzEzOTI0Mjk3ODg-
[5]
http://groups.yahoocom/group/loopantennas/message/10487;_ylc=X3oDMTM3cDQxcG9hBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDQ4OARzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzEzOTI0Mjk3ODgEdHBjSWQDMTA0ODc-
[6] http://groups.yahoo.com/group/loopantennas/links
[7] http://groups.yahoo.com/group/loopantennas/files
[8] http://ph.groups.yahoo.com/group/loopantennas/photos
[9]
http://groups.yahoo.com/group/loopantennas;_ylc=X3oDMTJmbDgxM3VoBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzEzOTI0Mjk3ODg-
[10]
http://groupsyahoo.com/group/loopantennas/members;_ylc=X3oDMTJnc2tjZGc4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxMzkyNDI5Nzg4?o=6
[11]
http://groups.yahoo.com/;_ylc=X3oDMTJlbTNidXVnBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTM5MjQyOTc4OA--
[12] http://info.yahoo.com/privacy/us/yahoo/groups/details.html
[13]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[14] http://info.yahoo.com/legal/us/yahoo/utos/terms/

10491. Re: [loopantennas] Loop Antenna Balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-16 19:14:13 UTC
From: <timchandler2001@...>
Topic: 10487 Message: 10491

HOA = Home Owners Association, also may be known as the Nazi Architectural Control Committee, etc. that often abitrarily and strictly enforces silly regulations and rules created usually by a small group who want to control how others live, and charge you for the privilege...fortunately not all neighborhoods have one.

10492. Re: [loopantennas] Loop Antenna Balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-16 19:25:48 UTC
From: <gnuarm.2006@...>
Topic: 10487 Message: 10492

It may be true that HOAs can seem to be overbearing. But everywhere I know of the homeowner is informed of the HOA before buying the home.

That said, one of the great things about a loop antenna is that it can have nearly any shape and can be easily disguised within the normal architectural features of nearly any home. After all, it is just a piece of wire. :)

10493. Re: [loopantennas] Loop Antenna Balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-15 02:51:28 UTC
From: JIM HANDLEY
Topic: 10487 Message: 10493

Harry,

Might you not be better off with an easily homemade multiband dipole, cut and orientated to the frequencies/regions of your preference? Such an antenna is easily hidden, too and its installation may not even contravene your local legislation.

J.

10494. N3FJP's Nested Loop article 2014 March QST

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-15 05:17:47 UTC
From: <kb8nty@...>
Topic: 10494 Message: 10494

Check out N3FJP's Loop antenna article in the new 2014 March QST issue.
Don't have it yet, it's also now on ARRL website. Interesting read...
-73- Ross -KB8NTY-
www.rossradio.net http://www.rossradio.net

10495. Nested Loop Antenna March QST

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-16 16:27:55 UTC
From: <kb8nty@...>
Topic: 10495 Message: 10495

N3FJP & son had built a multiband nested loop...looks interesting...and a good read!
http://www.nxtbook.com/nxtbooks/arrl/qst_201403/index.php
http://www.nxtbook.com/nxtbooks/arrl/qst_201403/index.php

It is featured in the March 2014 QST, and is available also on-line.

-73-
Ross -KB8NTY-
www.rossradio.net http://www.rossradio.net

10496. Nested Loop Antenna March QST (duplicate post)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-17 04:28:53 UTC
From: <kb8nty@...>
Topic: 10496 Message: 10496

Just wanted to report, my duplicate (not exact) nested loop post was due to a long delay. Well what seemed long as I posted my first, then the next day I didn't see it up yet, so I created another.
Other yahoo groups my posts usually post within minutes to less than 1/2 hour so I thought maybe I had made an error in the original post.

To my surprise now both appear?...Go figure?...No big deal, just wanted to explain!
So anyway regardless checkout the article, I just wanted to share with the group.

-73-
Ross -KB8NTY-
www.rossradio.net http://www.rossradio.net

10497. Re: [loopantennas] N3FJP's Nested Loop article 2014 March QST

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-17 17:11:01 UTC
From: Richard (Rick) Karlquist
Topic: 10494 Message: 10497

Yet another worthless QST antenna article.
This is nothing new, it is just the driven element
from a quad antenna. Lightning Bolt sold a 5
band quad 30 years ago. Only they wisely used
fiberglass spreaders, instead of PVC. PVC is a
terrible structural material. They also wisely
used a broadband transformer instead of bandwidth
limiting 75 ohm sections. The article claims
there is no interaction between elements. I
don't know how the author arrived at this, but
I modeled this configuration a few years ago
and found that there is substantial interaction
especially on 10 meters. And I modeled it with
relays at the feed points to open up the unused
loops. As described in QST, it would have even
more interaction.

Rick N6RK

On 2/14/2014 9:17 PM, kb8nty@... wrote:
> Check out N3FJP's Loop antenna article in the new 2014 March QST issue.
>
> Don't have it yet, it's also now on ARRL website. Interesting read...
>
> -73- Ross -KB8NTY-
>
> www.rossradio.net <http://www.rossradio.net>
>

10498. RE: [loopantennas] Nested Loop Antenna March QST

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-16 20:38:37 UTC
From: Silverfox
Topic: 10495 Message: 10498
Attachments: 2 described; binary payloads are missing from this source WARC

One of club member built a similar multi-band loop out of fiberglass poles and tie wraps. It performed very well and did many QSLs on field day.

73,

Alan - W6ARH

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of kb8nty@...
Sent: Sunday, February 16, 2014 8:28 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Nested Loop Antenna March QST

N3FJP & son had built a multiband nested loop...looks interesting...and a good read!

http://www.nxtbook.com/nxtbooks/arrl/qst_201403/index.php

It is featured in the March 2014 QST, and is available also on-line.

-73-

Ross -KB8NTY-

www.rossradio.net

10499. RE: [loopantennas] Nested Loop Antenna March QST

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-18 03:31:30 UTC
From: <kb8nty@...>
Topic: 10495 Message: 10499

W6ARH,
Sounds good Alan!

-73-
Ross -KB8NTY-
www.rossradio.net http://www.rossradio.net

10500. Re: [loopantennas] N3FJP's Nested Loop article 2014 March QST

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-18 06:27:05 UTC
From: <kb8nty@...>
Topic: 10494 Message: 10500

N6RK-Rick,
Hello-sure didn't mean to get you upset...sorry if so.
Just with good intentions I wanted to share, some may have been more receptive to it.

Having said that-do know I for one personally value your vast-proven knowledge-especially regarding loops-radials etc,

You and I had been exchanging messages regarding your "remote tuned" loop design. Last communication was this past November. I had expressed great interest in a design favoring 80-40-30 meters, you had referenced a 10' and 20' design, with a few tweaks-eliminations of a few diodes. conversation ended with you stating you were field testing this modified design and was going to check performance of the modified circuit with the 10' loop and also a 20' which would also include 160m!

I had continually expressed my interested, but requested for you work on it only as you could. Very last message you said possibly over that weekend you may give it a field test...My concerns all along were I wanted you to accommodate my request truly at your convenience as I know you remain busy, I was sincere in my interest request, but after November I received no further communication?

I didn't want to harass you or bother you, so I have sat back, checking often for any follow-up reply with your findings. When I seen your reply to my QST nested loop post, I thought it may be an opportunity to touch base once more in the interest and hopes of some positive findings, allowing to move ahead.

Please follow-up if you wish-off list possibly would be best, I am good on QRZ, or at jrl@wowway.com

It was good to see you in there-although sure didn't mean to create a problem with my post. Was just trying to pass on the article to others to view and digest.

Thank you Rick, for working with me on my previous interest in your remotely tuned receiving loop and my inquire we previously had been exchanging communication up till November 2013....Thinking something may had come up, so was relieved to see your recent active post- as now I know all is ok on your end friend.

Kind Regards Rick.
Ross -KB8NTY-
www.rossradio.net http://www.rossradio.net

10501. Re: [loopantennas] re: Alpha Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-18 11:45:09 UTC
From: <k910dog@...>
Topic: 10471 Message: 10501

If some owns a Alpha Loop antenna can they post some clear pictures of the coupling box and antenna in general. I think these are great antennas for portable use, from descriptions I have heard they are well built but even the manufacture does not have clear pictures of the antenna on their web page. There are hundreds of pictures of the Alex Loop antenna and with this being a the same type of antenna, it would be great to compare the way they are made. I am currently working on a Aluminum loop antenna made from 5/8 inch wide strips of flat bar about 1/8 inch thick. They bolt together and have a permanent bend to them so when assembled form a near perfect 4 foot diameter loop. I am using 1/4 inch Teflon insert lock nuts, washers and bolt to assemble the antenna. Takes a little more time to assemble than the Alex loop but over all I like the way I have it. From the pictures of the Alpha loop, they seem very similar. Don't have any idea what type of capacitor is used in the Alpha loop but at this point it really does not matter. This loop design is always up for improvements. But if anyone has one of the Alpha loop, some clear pictures and descriptions would be great!

10502. air core loop antenna balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-18 12:26:09 UTC
From: <dj_philonline@...>
Topic: 10502 Message: 10502

Hi, looking for the winding details of a 2.5:1 air core balun for a single band loop antenna, I have read lots of arguments against these but still wish to try one against my 4:1 toroid balun out of interest, there is a guy in the USA selling them with good reviews but for the sake of a plastic tube former and some wire it would not be cost effective to have one shipped to over here in the UK, does anybody on this forum have the winding details or a link to constructing one as I cannot find it anywhere? cheers
Phil
M6MRP

10503. RE: air core loop antenna balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-19 04:55:25 UTC
From: <kb8nty@...>
Topic: 10502 Message: 10503

M6MRP-Phil,
I have also been following this fellow and his balun.
Seems the reviews are quite positive and yes the balun ratio seems to be more in-line with matching a loop's resonance. Hard to be 100% sure though!
A bit back he posted the actual details and winding diagram, but checking back to help answer your request, I notice he has taken those specifics off his site and eBay, but still includes all the swr plots etc.

I'm thinking I had bookmarked that information...I will try to look and see if it's still there for you.
On a brighter note as an established eBay top rated and power seller, I do know eBay had set up a global shipping program!...This makes the out of US purchasing and shipping much less expensive...However the big issue is the eBay seller needs to sign up to take part in this program, don't know why he wouldn't as it really don't cost the seller all that much more to take part, and it allows exposure to sell world-wide right on eBay.
Take a look on his eBay listings, don't recall his eBay handle, but you can search the item, I think it's called the AG6IF talented balun, and also loop antenna as he sells the balun alone or with the loop antenna wire.
His listing will say if it's set up for eBays global shipping program, if not you can message him-through eBay and request he set it up.

It will sure be less expensive shipping using the global shipping program, than buying and shipping through normal channels.

I'll look to see if I still have his balun design details bookmarked, but may take a few days as I'm in and out of my QTH here recently.

Good Luck Friend!

-73-
Ross -KB8NTY-
www.rossradio.net http://www.rossradio.net

10504. Re: [loopantennas] RE: air core loop antenna balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-19 11:22:13 UTC
From: phil blast
Topic: 10502 Message: 10504

Thanks Ross, if you still have the details saved that would be a great help, he has nothing on Ebay at the moment I have already checked, I have pondered over this for a while now about using a 4:1 balun which is meant for 200 ohms down to 50 on a loop that is from 125 to 130 ohms or around there depending on how its deployed, it leaves the match way below the required 50 ohms, even a 3:1 would be better but could not find any details on building them? I am in the middle of moving qth at the moment but once settled I intend to try a few experimental windings and see if I can get close myself, about the global shipping on Ebay last year I was looking to purchase a build yourself switchable low pass filter board with all the components from over the pond and the seller told me the USA was not yet signed up for it so shipping was still expensive? if they have now it will make things a whole lot easier as there is so much over there which we do not have in
the UK radio wise and I am desperate for a new battery for my Yaesu FT51r handy which is not available in the UK (the battery) but abundant in the US even in the newer chemical formats but they will not be allowed to be shipped as they are liquid gel.
regards
Phil M6MRP

On Wednesday, 19 February 2014, 4:55, "kb8nty@..." <kb8nty@...> wrote:

M6MRP-Phil,
I have also been following this fellow and his balun.
Seems the reviews are quite positive and yes the balun ratio seems to be more in-line with matching a loop's resonance. Hard to be 100% sure though!
A bit back he posted the actual details and winding diagram, but checking back to help answer your request, I notice he has taken those specifics off his site and eBay, but still includes all the swr plots etc.

I'm thinking I had bookmarked that information...I will try to look and see if it's still there for you.
On a brighter note as an established eBay top rated and power seller, I do know eBay had set up a global shipping program!...This makes the out of US purchasing and shipping much less expensive...However the big issue is the eBay seller needs to sign up to take part in this program, don't know why he wouldn't as it really don't cost the seller all that much more to take part, and it allows exposure to sell world-wide right on eBay.
Take a look on his eBay listings, don't recall his eBay handle, but you can search the item, I think it's called the AG6IF talented balun, and also loop antenna as he sells the balun alone or with the loop antenna wire.
His listing will say if it's set up for eBays global shipping program, if not you can message him-through eBay and request he set it up.

It will sure be less expensive shipping using the global shipping program, than buying and shipping through normal channels.

I'll look to see if I still have his balun design details bookmarked, but may take a few days as I'm in and out of my QTH here recently.

Good Luck Friend!

-73-
Ross -KB8NTY-
www.rossradio.net

10505. RE: air core loop antenna balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-20 05:02:33 UTC
From: <kb8nty@...>
Topic: 10502 Message: 10505

M6MRP-Phil,
Well having the bookmark indeed saved, when clicking on it though, it brings up the current eBay page, which is not including the diagram.

I am also going to check in my documents files, which would indeed have the diagram, as the document file was not his actual previous eBay page... I will continue to search my document files, possibly I may have cut and pasted the balun design, but many files to search and not sure of what title I would have assigned the file...so maybe just maybe it may be in there, I would let you know if so!

Also researching the eBay global program, it has grown greatly...here are all the countries eBay will ship, at less than direct postal methods, and includes complete tracking!

Australia

Austria

Belgium

Bulgaria

Canada

China

Cyprus

Czech Republic

Denmark

Estonia

Finland

France

Germany

Greece

Hong Kong

Hungary

Indonesia

Ireland

Israel

Italy

Japan

Latvia

Lithuania

Malta

Mexico

Netherlands

New Zealand

Philippines

Poland

Portugal

Romania

Russia

Singapore

South Africa

South Korea

Spain

Sweden

Slovakia

Slovenia

Taiwan

Thailand

United Kingdom

Good luck...PS: Balun designs also offers similar loop balun of interest, yet also not inexpensive.
Continued luck Phil, old boy.
-73-
Ross -KB8NTY-
www.rossradio.net http://www.rossradio.net

10506. RE: air core loop antenna balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-20 23:17:13 UTC
From: <dj_philonline@...>
Topic: 10502 Message: 10506

Hi Ross, yes I have seen the balun designs twin toroid 2.5:1 version and I have the winding details to make that one from before they started to market it, never built one yet as I have found the much cheaper 4:1 air core to do the job on another antenna I use so decided that I would try an air core for the 2.5:1 on a loop. That ebay global list has grown quite a bit and the last time I checked, Canada was not in so there is another bonus, I had a feeling the bookmarked link would just go to the newer page as that has happend to me a few times, now I either save the page or harvest the images required, not a problem if you cant find it as I will work it out the old way with trial and error (prob. more error lol)
73
Phil
M6MRP

10507. Re: [loopantennas] RE: air core loop antenna balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-19 08:53:52 UTC
From: John
Topic: 10502 Message: 10507

Is this the gentleman.

http://www.ebay.co.uk/itm/AG6IF-Talented-Balun-for-build-HF-Ham-radio-Sky-Loop-antenna-160m-80m-40-10-/360692848707

Windows 7 Home Premium.

Regards
John Barnett

York North Yorkshire Locator IO93lw

Save Shortwave Radio.
http://www.mikeandsniffy.co.uk/UKQRM/

On 19 February 2014 04:55, <kb8nty@...> wrote:

>
>
> M6MRP-Phil,
>
> I have also been following this fellow and his balun.
>
> Seems the reviews are quite positive and yes the balun ratio seems to be
> more in-line with matching a loop's resonance. Hard to be 100% sure though!
>
> A bit back he posted the actual details and winding diagram, but checking
> back to help answer your request, I notice he has taken those specifics off
> his site and eBay, but still includes all the swr plots etc.
>
>
> I'm thinking I had bookmarked that information...I will try to look and
> see if it's still there for you.
>
> On a brighter note as an established eBay top rated and power seller, I do
> know eBay had set up a global shipping program!...This makes the out of US
> purchasing and shipping much less expensive...However the big issue is the
> eBay seller needs to sign up to take part in this program, don't know why
> he wouldn't as it really don't cost the seller all that much more to take
> part, and it allows exposure to sell world-wide right on eBay.
>
> Take a look on his eBay listings, don't recall his eBay handle, but you
> can search the item, I think it's called the AG6IF talented balun, and also
> loop antenna as he sells the balun alone or with the loop antenna wire.
>
> His listing will say if it's set up for eBays global shipping program, if
> not you can message him-through eBay and request he set it up.

>
>
> It will sure be less expensive shipping using the global shipping program,
> than buying and shipping through normal channels.
>
>
> I'll look to see if I still have his balun design details bookmarked, but
> may take a few days as I'm in and out of my QTH here recently.
>
>
> Good Luck Friend!
>
>
> -73-
>
> Ross -KB8NTY-
>
> www.rossradio.net
>
>
>
>
>
>

10508. Re: [loopantennas] RE: air core loop antenna balun

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-21 04:59:59 UTC
From: <kb8nty@...>
Topic: 10502 Message: 10508

10-4 John....

-73- Ross - KB8NTY
www.rossradio.net http://www.rossradio.net

10509. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-21 10:58:09 UTC
From: Andy Gardner
Topic: 10416 Message: 10509

Well, my bulk buy of BC549C's has arrived, so one more question before I get started on the amplifier...

How closely do I need to match the transistor pairs? Can I just go by HFE reading on my cheap digital multimeter, or for best results do I need to break out something a bit more serious? If so, what exactly? :)

Can I just use my 8405A and check that there's exactly 180 deg phase and equal amplitude on each side?

Thanks,

10510. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-21 12:57:07 UTC
From: Chris Trask
Topic: 10416 Message: 10510

>
>Well, my bulk buy of BC549C's has arrived, so one more question before I get started on the amplifier...
>
>How closely do I need to match the transistor pairs? Can I just go by HFE reading on my cheap digital multimeter, or for best results do I need to break out something a bit more serious? If so, what exactly? :)
>
>Can I just use my 8405A and check that there's exactly 180 deg phase and equal amplitude on each side?
>

I never did go to the trouble of determining if hfe imbslance affected the performance, and it's less important for common base amplifiers than it is for common emitter. But, my feeling is that a match of 5% or less would be prudent.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10513. Box Loop Antenna Rewind?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-24 03:01:48 UTC
From: <hmholden69@...>
Topic: 10513 Message: 10513

I have a 3 ft box loop antenna that is wound with 18 gauge stranded plastic covered wire, would I gain anything by rewinding the loop with litz wire? If so, what size litz wire would be best to use?

10514. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-24 12:35:15 UTC
From: Andy Gardner
Topic: 10416 Message: 10514

On 22/02/2014, at 1:57 AM, Chris Trask wrote:

> >
> >Well, my bulk buy of BC549C's has arrived, so one more question before I get started on the amplifier...
> >
> >How closely do I need to match the transistor pairs? Can I just go by HFE reading on my cheap digital multimeter, or for best results do I need to break out something a bit more serious? If so, what exactly? :)
> >
> >Can I just use my 8405A and check that there's exactly 180 deg phase and equal amplitude on each side?
> >
>
> I never did go to the trouble of determining if hfe imbslance affected the performance, and it's less important for common base amplifiers than it is for common emitter. But, my feeling is that a match of 5% or less would be prudent.
>

Thanks Chris.

I've just started winding the transformers. I've only got AWG30 wire rather than AWG32 so I've had to use 2873000202 instead of 2873002402 as I an't fit 4 turns of it on the smaller core. Hopefully I can cram it all on the board I'm using.

I still have to sort out some low ESR caps, but I've pretty much got everything I need to build one, finally.

Cheers,

Andy
ZL3AG

10515. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-24 13:15:13 UTC
From: Chris Trask
Topic: 10416 Message: 10515

>
>>
>> >
>> >Well, my bulk buy of BC549C's has arrived, so one more question before I get started on the amplifier...
>> >
>> >How closely do I need to match the transistor pairs? Can I just go by HFE reading on my cheap digital
>> >multimeter, or for best results do I need to break out something a bit more serious? If so, what exactly? :)
>> >
>> >Can I just use my 8405A and check that there's exactly 180 deg phase and equal amplitude on each side?
>> >
>>
>> I never did go to the trouble of determining if hfe imbslance affected the performance, and it's less
>>important for common base amplifiers than it is for common emitter. But, my feeling is that a match of 5%
>>or less would be prudent.
>>
>
>Thanks Chris.
>
>I've just started winding the transformers. I've only got AWG30 wire rather than AWG32 so I've had to use 2873000202 instead of 2873002402 as I an't fit 4 turns of it on the smaller core. Hopefully I can cram it all on the board I'm using.
>
>I still have to sort out some low ESR caps, but I've pretty much got everything I need to build one, finally.
>

Go for it! In case you're interested, there's a seller on eBay who is selling the MPS6521 at pretty reasonable prices. I bought two lots of 25 for $10 each from him, which will satisfy my needs. They're basically a 2N2222 with twice the current gain. It's a shame that they were never made in SMT so that they might still be available.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10516. Re: [loopantennas] Trask Amplifier for Wideband Active Loop Amp - mod suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-25 13:34:49 UTC
From: <tom.genereaux@...>
Topic: 10416 Message: 10516

I just checked Mouser and they have them in stock.

10517. Yahoo at its best

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-27 05:11:14 UTC
From: <graemes2@...>
Topic: 10517 Message: 10517

Can any member advise me on how I can up-load a pdf file into the files section?
I can't seem to find a "post" button anywhere.
tnx 73
Graeme

10518. Vintage Loop Antenna Chart

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-27 05:13:29 UTC
From: <graemes2@...>
Topic: 10518 Message: 10518
Attachments: 1 described; binary payloads are missing from this source WARC

Maybe I have found it after all
I'll try this
Graeme

10519. Re: [loopantennas] Yahoo at its best

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-27 06:19:40 UTC
From: Andy
Topic: 10517 Message: 10519

Graeme wrote:

"Can any member advise me on how I can up-load a pdf file into the files section?
I can't seem to find a "post" button anywhere."

There should be a purple "Upload" button near the upper right corner.

First you need to go into the Files area, then navigate to the directory where you want the upload to appear. Then press Upload.

If you don't see it, then you are probably using a web browser that Yahoo does not support. Ugh.

Attaching a file to an email message doesn't exactly put it into the Files area. It is a different function. It's OK for what it does, but it works differently, and the file does not come up when someone goes into the Files area a year from now, looking for that file. That's one reason why I prefer using the Files area, rather than attached files.

Andy

10520. Re: [loopantennas] Yahoo at its best

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-27 06:58:38 UTC
From: <graemes2@...>
Topic: 10517 Message: 10520

Thanks Andy, I think I have succeeded in posting in both locations.
I would rather have had the previous format that was used before Yahoo "fixed" it
tnx 73
Graeme

10521. RE: Box Loop Antenna Rewind?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-02-28 18:30:01 UTC
From: <dannibou@...>
Topic: 10513 Message: 10521

Hi. I have the same loop arrangment too and I'm planning to buy Litz wire but I don't know which is best. Hope someone here will answer. We are two who want to know this info.
Thanks.
Danny

www.dannibou.wordpress.com http://www.dannibou.wordpress.com

10522. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-01 13:18:50 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10522

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10523. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-01 13:18:50 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10523

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10524. RE: Box Loop Antenna Rewind?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-01 23:04:14 UTC
From: <hmholden69@...>
Topic: 10513 Message: 10524

Doing some quick research on Litz wire and loop antennas, it appears that solid wire is better than stranded and litz wire is the best of all for various technical reasons having to do with electron spin and skin currents.On paper if you use Litz wire the "Q" of the loop should improve and the sensitivity increase. 175/46 type wire seems to be the most recommended size to use. Question is, is the improvement to the loop worth the time and expense to do it and will we snag more DX with the Litz wire loop. Anyone ever done this and have real world comparisons?

10525. RE: Box Loop Antenna Rewind?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-02 06:34:49 UTC
From: <n3ikq@...>
Topic: 10513 Message: 10525

There is a lot of info out there if you dig for it. In no particular order:

http://www.angelfire.com/electronic2/index1/Litz-Wire-Frequency.pdf
http://www.angelfire.com/electronic2/index1/Litz-Wire-Frequency.pdf
http://www.mediafire.com/view/v8bpdex2drxuxnp/7.5inchLS-PL380.doc
http://www.mediafire.com/view/v8bpdex2drxuxnp/7.5inchLS-PL380.doc
Any ebay auctions from mkmak222 http://myworld.ebay.com/mkmak222?_trksid=p2047675.l2559
have a lot of information plus he's a reliable seller.
http://www.ece.gatech.edu/academic/courses/ece4007/09spring/ece4007l01/sk4/trp5.pdf
http://www.ece.gatech.edu/academic/courses/ece4007/09spring/ece4007l01/sk4/trp5.pdf
http://www.thomasn.sverige.net/7_Inch_Affordable_FSL.pdf
http://www.thomasn.sverige.net/7_Inch_Affordable_FSL.pdf

etc. etc. etc.

10526. Antenna efficiency: Comparing the Alpha Loop & Alex Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-02 22:35:59 UTC
From: <aa2nh@...>
Topic: 10526 Message: 10526

Antenna efficiency: Comparing the Alpha Loop & Alex Loop
I have spent much time inputting all of the variables into
http://www.66pacific.com/calculators/small_tx_loop_calc.aspx
http://www.66pacific.com/calculators/small_tx_loop_calc.aspx for the bands that are safe to operate both the Alex and Alpha Loop on, and found why the Alpha Loop has more gain.
The measurements from Alex for his loop are Length of Conductor (antenna "circumference") = 10.3 feet & Diameter of Conductor .32 inches.
Here are the calculated efficencies for the Alex and Alpha Loop antenna's. Please not that the Alpha Loop's measurements are Length of Conductor = 9.92 feet & Diameter of Conductor = .477

Antenna efficiency - The Alpha Loop VS the Alex Loop
From 7 to 7.3 MHz
Alpha Loop; 8% - 9%
Alex Loop; 6% - 7%

From 10.1 to 10.150 MHz
Alpha Loop: 23% - 23%
Alex Loop: 18% - 18%

From 14 to 14.350 MHz
Alpha Loop: 48% - 50%
Alex Loop: 41% - 43%

From 18.068 to 18.168 MHz
Alpha Loop: 69% - 70%
Alex Loop: 63% - 63%

From 21 to 21.450 MHz
Alpha Loop: 79% - 80%
Alex Loop: 74% - 76%

An alarming find when I input Alex's measurements for his loop into
http://www.66pacific.com/calculators/small_tx_loop_calc.aspx
http://www.66pacific.com/calculators/small_tx_loop_calc.aspx for 10 through 12 Meters occurred. On those frequencies a RED message appears that says:
"To avoid self-resonance, the conductor length for a small transmitting loop antenna should be less than 1/4 wavelength."
I now understand why the AlexLoop should not be used on 10 & 12 Meters, which is because exponential increases in resistance will occur on a small transmitting loop when self-resonance occurs, which can damage equipment.
For more information on this, see the section titled "Inductance and self-resonance" here:
http://www.antennex.com/preview/Dec03/Dec603/Loopantennas.htm
http://www.antennex.com/preview/Dec03/Dec603/Loopantennas.htm

10528. Antenna Modeling Software

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-06 03:56:59 UTC
From: <ac2gl@...>
Topic: 10528 Message: 10528

Does anyone have any experience with AN-SOF Professional antenna simulation software <http://www.antennasoftware.com.ar/>? Aside from price, is it any better or worse than EZNEC, 4NEC2, MMANA-GAL? What are your experiences and suggestions?
73 Dave - AC2GL

10529. RE: Antenna Modeling Software

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-07 01:05:53 UTC
From: <graemes2@...>
Topic: 10528 Message: 10529

Couldn't get it to work on XP or Win 7 64 bit due to mclmcrrt71.dll can't be located, even tho' it was installed
Graeme

10530. New Yahoo User Group *All about RF Ground Radials*

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-10 21:45:28 UTC
From: <kb8nty@...>
Topic: 10530 Message: 10530

Just wanted to share information of a new Yahoo user group.
https://groups.yahoo.com/neo/groups/groundradial/conversations/messages
https://groups.yahoo.com/neo/groups/groundradial/conversations/messages

It is specifically for RF Ground Radial talk...Anything and everything about "ground radials"
A public group so registering and waiting for approval just to take part is not required!

Stop by to check it out, join in and share your experiences or ask for help!

-73- Ross KB8NTY
https://groups.yahoo.com/neo/groups/groundradial/conversations/messages
https://groups.yahoo.com/neo/groups/groundradial/conversations/messages

http://www.rossradio.net/ http://www.rossradio.net/

10531. N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-14 01:59:09 UTC
From: <kb8nty@...>
Topic: 10531 Message: 10531

To the group;

I am planing to purchase a receive loop antenna tuning network from N6RK Rick.
Certainly not to question him or his talents.
Already having a shielded coaxial loop, this would be the antenna tuning network, and the remote tuning box to assemble and connect to my loop.
Of course this is a well received proven type of receiving antenna published in the NCJ magazine some years ago.

I was just curious has anyone either purchased or built this exact system?
If so wondering how it may have worked out for you, or did it?

Respectfully I am not interested in the different types of receiving antennas. EWE's K9AY, beverage ETC. ETC.that you may have found to be better.

I am more so very interested in your experiences and opinion of this specific remote-tuned loop.
How has it performed, did it, how did you mount it, how high, how close to your transmit antenna,use a rotor ETC.?

By means of severe space restriction, it is this type of receiving antenna I am selecting, and have specific only interest in and wanted to learn from anyone who may have any actual experience with.

Thank you very much in advance for any potential replies, advise and help.

73 Ross KB8NTY
www.rossradio.net http://www.rossradio.net
https://groups.yahoo.com/neo/groups/groundradial/info
https://groups.yahoo.com/neo/groups/groundradial/info

10532. Re: [loopantennas] N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-14 02:48:35 UTC
From: Tony Magon
Topic: 10531 Message: 10532

Have a look at this article - It might give you some ideas.

http://www.dxing.info/equipment/rolling_your_own_bryant.dx
73

Tony VK2IC

On Fri, Mar 14, 2014 at 12:59 PM, <kb8nty@...> wrote:

>
>
> To the group;
>
> I am planing to purchase a receive loop antenna tuning network from N6RK
> Rick.
> Certainly not to question him or his talents.
> Already having a shielded coaxial loop, this would be the antenna tuning
> network, and the remote tuning box to assemble and connect to my loop.
> Of course this is a well received proven type of receiving antenna
> published in the NCJ magazine some years ago.
>
> I was just curious has anyone either purchased or built this exact system?
> If so wondering how it may have worked out for you, or did it?
>
> Respectfully I am not interested in the different types of receiving
> antennas. EWE's K9AY, beverage ETC. ETC.that you may have found to be
> better.
>
> I am more so very interested in your experiences and opinion of this
> specific remote-tuned loop.
> How has it performed, did it, how did you mount it, how high, how close to
> your transmit antenna,use a rotor ETC.?
>
> By means of severe space restriction, it is this type of receiving antenna
> I am selecting, and have specific only interest in and wanted to learn from
> anyone who may have any actual experience with.
>
> Thank you very much in advance for any potential replies, advise and help.
>
> 73 Ross KB8NTY
> www.rossradio.net
> https://groups.yahoo.com/neo/groups/groundradial/info
>
>
>
>

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>
>

10533. Re: [loopantennas] N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-14 06:04:37 UTC
From: <kb8nty@...>
Topic: 10531 Message: 10533

Thank you Tony!

Regards, Ross KB8NTY
https://groups.yahoo.com/neo/groups/groundradial/info
https://groups.yahoo.com/neo/groups/groundradial/info
http://www.rossradio.net http://www.rossradio.net

10534. Difficulties aside, best design placement of all the components of the Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-21 08:13:10 UTC
From: <k910dog@...>
Topic: 10534 Message: 10534

I was hoping for some detailed discussion on the best/ideal location of the tuning capacitor, (motor if remotely tuned) and coupling loop/RF feed method. All pose design problems and considerations weather it is permanent mounting or use or portable and supply's needed or on hand. But if all these things aside , what would be the best RF configuration of the loop. Most portable loops have the tuning capacitor at the bottom for obvious reasons and the RF feed point at the opposite side (Top) of the loop. What comes to mind is the coax crosses the RF path to the transceiver. If you reverse this and place the tuning at the top this makes it more difficult to tune the antenna and also makes it more difficult to keep from interfering with the loop while tuning. Now if you consider the point of the tuning capacitor has the most RF this removes it from the operator and possibly helps with the signal/RF being at a higher point. If you use remote tuning in this configuration, this removes the interference from the equation but possible RF problems being so close to the motor-and this too may cause interference. In theory, and I am just guessing, you could put just the capacitor at the top, RF feed at the bottom and maybe use some kind of non conducting shaft from the capacitor down to below the loop, away from the RF field to a motor, this seems to me an ideal set up. This of course is not good for portable but maybe just design ideal. Please i know there are a lot of experience persons that have tried or maybe tested some of these different configuration, we would all benefit from the knowledge. Thank you

10535. Re: [loopantennas] Difficulties aside, best design placement of all the components of the Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-21 13:50:56 UTC
From: Chris Trask
Topic: 10534 Message: 10535

>
>I was hoping for some detailed discussion on the best/ideal location of the tuning capacitor, (motor if
>remotely tuned) and coupling loop/RF feed method. All pose design problems and considerations weather it
>is permanent mounting or use or portable and supply's needed or on hand. But if all these things aside ,
>what would be the best RF configuration of the loop. Most portable loops have the tuning capacitor at the
>bottom for obvious reasons and the RF feed point at the opposite side (Top) of the loop. What comes to
>mind is the coax crosses the RF path to the transceiver. If you reverse this and place the tuning at the
>top this makes it more difficult to tune the antenna and also makes it more difficult to keep from
>interfering with the loop while tuning. Now if you consider the point of the tuning capacitor has the
>most RF this removes it from the operator and possibly helps with the signal/RF being at a higher point.
>If you use remote tuning in this configuration, this removes the interference from the equation but
>possible RF problems being so close to the motor-and this too may cause interference. In theory, and I
>am just guessing, you could put just the capacitor at the top, RF feed at the bottom and maybe use some
>kind of non conducting shaft from the capacitor down to below the loop, away from the RF field to a motor,
>this seems to me an ideal set up. This of course is not good for portable but maybe just design ideal.
>Please i know there are a lot of experience persons that have tried or maybe tested some of these
>different configuration, we would all benefit from the knowledge. Thank you
>

There is a third approach to the design of a remotely tuned transmitting loop antenna that does away with the expensive vacuum variable capacitor and the coupling loop:

http://www.home.earthlink.net/~christrask/Paper012.html

I'm presently looking at a variation that requires a single variable capacitor instead of the ganged dual.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE

http://www.home.earthlink.net/~christrask/

10536. Best placement of all the components of the Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-22 07:58:29 UTC
From: Craig F. Simmons
Topic: 10536 Message: 10536

I was hoping for some detailed discussion on the best/ideal location of the tuning capacitor, (motor if remotely tuned) and coupling loop/RF feed method. All pose design problems and considerations weather it is permanent mounting or use or portable and supply's needed or on hand. But if all these things aside , what would be the best RF configuration of the loop. Most portable loops have the tuning capacitor at the bottom for obvious reasons and the RF feed point at the opposite side (Top) of the loop. What comes to mind is the coax crosses the RF path to the transceiver. If you reverse this and place the tuning at the top this makes it more difficult to tune the antenna and also makes it more difficult to keep from interfering with the loop while tuning. Now if you consider the point of the tuning capacitor has the most RF this removes it from the operator and possibly helps with the signal/RF being at a higher point. If you use remote tuning in this configuration, this removes the interference from the equation but possible RF problems being so close to the motor-and this too may cause interference. In theory, and I am just guessing, you could put just the capacitor at the top, RF feed at the bottom and maybe use some kind of non conducting shaft from the capacitor down to below the loop, away from the RF field to a motor, this seems to me an ideal set up. This of course is not good for portable but maybe just design ideal. Please i know there are a lot of experience persons that have tried or maybe tested some of these different configuration, we would all benefit from the knowledge. Thank you

10537. Re: [loopantennas] Difficulties aside, best design placement of all the components of the Magnetic Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-03-24 08:20:02 UTC
From: Craig F. Simmons
Topic: 10534 Message: 10537

I am currently gathering all the parts to make a remote tuned 15-40 meter loop antenna similar to an Alpha loop except the design will have some improvements for my use and tastes. This will be for portable use but not necessary "portable as in an Alex loop or Alpha loop antenna system. Mine will be made out of common found aluminum strips, small inductance loop at top, tuning capacitor at bottom connected by non-conductive shaft to DC motor/reduction gear. I will connect the tuning capacitor by 1/4 non-conducting shaft to DC motor/reduction gear well below the elevated loop using 1/4 universal couplings and 1/4 nylon bearing flange mounted. This will allow there to be free movement in the shaft and make it easier to mount with less stress on the whole system. This also allows the dc motor to be removed away from the RF field of the loop. This will take more time to set up, weigh more and be less portable due to components and size of space needed to pack. It will also be a lot more users friendly and easier to operate, change bands and get more precise tuning due to no proximity effect of manual tuning. I do mostly portable HF, without the worry of equipment needed, like field day. For strictly fast set up and portable HF, I do not believe there is much improvement that could be made to the Alpha loop or the Alex loop for what they are intended for use. When complete I will post pictures and step by step details. My main problem with current loops is they are the design for portable, quick set up and light weight. With these design requirements in mind it limits there construction. These same thoughts have me planning two big loops I want to build for permanent use for 160 and 75 meters. I will never have the real estate or the towers, tall trees to put up a proper large wire loop or wire antenna for those bands and from several articles I have read, a proper single band loop with vacuum variable capacitor makes a great antenna for these bands.

>
> >I was hoping for some detailed discussion on the best/ideal location of
> the tuning capacitor, (motor if
> >remotely tuned) and coupling loop/RF feed method. All pose design
> problems and considerations weather it
> >is permanent mounting or use or portable and supply's needed or on hand.
> But if all these things aside ,
> >what would be the best RF configuration of the loop. Most portable loops
> have the tuning capacitor at the
> >bottom for obvious reasons and the RF feed point at the opposite side
> (Top) of the loop. What comes to
> >mind is the coax crosses the RF path to the transceiver. If you reverse
> this and place the tuning at the
> >top this makes it more difficult to tune the antenna and also makes it
> more difficult to keep from
> >interfering with the loop while tuning. Now if you consider the point of

> the tuning capacitor has the
> >most RF this removes it from the operator and possibly helps with the
> signal/RF being at a higher point.
> >If you use remote tuning in this configuration, this removes the
> interference from the equation but
> >possible RF problems being so close to the motor-and this too may cause
> interference. In theory, and I
> >am just guessing, you could put just the capacitor at the top, RF feed at
> the bottom and maybe use some
> >kind of non conducting shaft from the capacitor down to below the loop,
> away from the RF field to a motor,
> >this seems to me an ideal set up. This of course is not good for portable
> but maybe just design ideal.
> >Please i know there are a lot of experience persons that have tried or
> maybe tested some of these
> >different configuration, we would all benefit from the knowledge. Thank
> you
> >
>
> There is a third approach to the design of a remotely tuned transmitting
> loop antenna that does away with the expensive vacuum variable capacitor
> and the coupling loop:
>
> http://www.home.earthlink.net/~christrask/Paper012.html
>
> I'm presently looking at a variation that requires a single variable
> capacitor instead of the ganged dual.
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>

10538. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-01 12:29:03 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10538

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10539. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-01 12:29:03 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10539

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10540. Re: N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-02 01:45:51 UTC
From: <summersb@...>
Topic: 10531 Message: 10540

Hi Ross:

I built a copy of N6RK's remotely tuned loop and experienced little success. I was able to null a particular noise source in one direction but still had a very high noise level. To put it another way there was little improvement in received S/N ratios. I would also add that over the years I've had little success with any type of shielded loop. I've come to a couple of conclusions. 1) living in suburbia noise is coming from all directions and there is no single source to null out, and 2), this following an email exchange with N6RK himself as well as other readings, there is a very high probability that noise is re-radiating from my 56ft high tower and the loop being only 60ft or so away is unable to do its job. Solution is to detune the tower which hopefully I'll get around to this summer.

The base of the loop is about 6ft above ground and is turned by a TV antenna type rotator.

As always, YMMV.

Brian VE7JKZ

10541. Re: N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-02 04:49:34 UTC
From: <kb8nty@...>
Topic: 10531 Message: 10541

Brian,
I was so pleasantly pleased to see your reply, not so with your results yet none the less what a pleasure to finally receive "any" response related to my specific inquire...for that sincere appreciation!

Well here in a small city lot with it's share of overhead power, cable, telephone lines I am seeking to improve my lower band receiving situation. Running a Mosley TA-33M WARC up on the rooftop and a Butternut HR9V ground mounted vertical w/ 125 radials,
I get out...sometimes use the yagi to receive with on 30-40-80 meters, but looking for better.

I did build a shielded coaxial loop 20' at 5' per side, notched at top and all one piece of RG-6. The feed line runs directly into shack. Issue is I built no tuning network into it...A surprise to see it does work to a degree, it does reduce the S/N but lacking any tuning abilities.
Its on a 3 foot tripod on ground w/rotor and about 40 feet from vertical.

I have read great reviews and have had conversation with N6RK, and was going to purchase an assembled unit as now being disabled I am unable to build and was asking for help with any users experiences.

Possibly you may benefit with the detuning of the transmit antenna, this is not so uncommon, but discouraged with reading your results.
I am thinking something don't sound as it should, I know there are better receiving antenna choices, yet I do not have the room, and even with my poorly constructed loop without any tuning, it did offer some help!

I wish to thank you sincerely for taking your time for your reply...If you get the chance do try the detuning process, I think your loop should do better than you experienced!

I'll post my follow-up experience for what its worth when I put his loop into play here ...Thanks again friend...I wish you luck with your loop there.
-73-
73 Ross KB8NTY
www.rossradio.net http://www.rossradio.net/ (all about ground radials)
https://groups.yahoo.com/neo/groups/groundradial/info
https://groups.yahoo.com/neo/groups/groundradial/info (ground radial talk-PLEASE VISIT & JOIN)

10542. Re: N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-02 15:01:00 UTC
From: <summersb@...>
Topic: 10531 Message: 10542

My pleasure Ross and I wish you well in your efforts. My goal has always been to improve reception capability on 160 and I'll have another go between now and fall. The tower which has a big beam on top is shunt fed for 160m and radiates well. Approx 3,000 feet of wire buried in the back and front yards.I can often hear people calling me but can't pull 'em out of the noise. It's tough!

73
Brian VE7JKZ

10543. Re: N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-03 02:15:58 UTC
From: <kb8nty@...>
Topic: 10531 Message: 10543

VE7JKZ - Brian,
Frustrating it is to know someone is calling you and you cannot pull them apart from the noise!

I have experienced that at times when putting out a CQ, I will hear them in there calling but "in the noise"
It does make you feel uneasy, then I wonder how are they hearing me is it propagation, or their receive set-up being better?

Here also dealing with a city lot, the noise varies. It's time for me to get more set up with receiving on the lower bands here. I have done my operating up till now with the HF9V Butternut w/125 radials and Mosley TA-33M-WARC.

My big issue is space limitations here, so focusing on the loops. I did try a BOG but it seemed to pick up a lot of noise from my extensive ground radial field.

I have learned to appreciate the study and theory of SNR and know that's what I have to hone in while balancing the selectivity & sensitivity working with the loop here.

So curious with your poor experiences with the loops, possibly some common mode chokes on your loops feed lines may help, because if your getting noise on them all, it may help experimenting with such, in the effort to decouple the noise from traveling in on your feed line.

Wishing you luck...I will report on my N6RK loop findings when I can here in the future.

Thanks again for your input...

Signing off.

-73-
73 Ross KB8NTY
www.rossradio.net http://www.rossradio.net/ (all about ground radials)
https://groups.yahoo.com/neo/groups/groundradial/info
https://groups.yahoo.com/neo/groups/groundradial/info (ground radial talk-PLEASE VISIT & JOIN)

10544. RE: [loopantennas] Re: N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-03 04:25:32 UTC
From: Silverfox
Topic: 10531 Message: 10544

Loop antennas should be about the best you can do on receiving. That is why they were employed by the military during the world wars. That is not to say that they are not in need of careful tuning. I cannot remember a comparison of technologies where the loop wasn't the winner. Perhaps I am naive in that respect but if I recall correctly loop antennas are capable of receiving nearly twice the signal of other designs.

73,

Alan - W6ARH

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com] On Behalf Of kb8nty@...
Sent: Wednesday, April 2, 2014 7:16 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: N6RK Remote Tuned Loop Experience

VE7JKZ - Brian,

Frustrating it is to know someone is calling you and you cannot pull them apart from the noise!

I have experienced that at times when putting out a CQ, I will hear them in there calling but "in the noise"

It does make you feel uneasy, then I wonder how are they hearing me is it propagation, or their receive set-up being better?

Here also dealing with a city lot, the noise varies. It's time for me to get more set up with receiving on the lower bands here. I have done my operating up till now with the HF9V Butternut w/125 radials and Mosley TA-33M-WARC.

My big issue is space limitations here, so focusing on the loops. I did try a BOG but it seemed to pick up a lot of noise from my extensive ground radial field.

I have learned to appreciate the study and theory of SNR and know that's what I have to hone in while balancing the selectivity & sensitivity working with the loop here.

So curious with your poor experiences with the loops, possibly some common mode chokes on your loops feed lines may help, because if your getting noise on them all, it may help experimenting with such, in the effort to decouple the noise from traveling in on your feed line.

Wishing you luck...I will report on my N6RK loop findings when I can here in the future.

Thanks again for your input...

Signing off.

-73-

73 Ross KB8NTY

www.rossradio.net <http://www.rossradio.net/> (all about ground radials)

https://groups.yahoo.com/neo/groups/groundradial/info (ground radial talk-PLEASE VISIT & JOIN)

10545. Re: N6RK Remote Tuned Loop Experience

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-03 07:36:21 UTC
From: <k910dog@...>
Topic: 10531 Message: 10545
Attachments: 1 described; binary payloads are missing from this source WARC

I still would like some input on angle of take off of a magnetic loop comparing the capacitor at the top or bottom along with any other information on best placement vs where they placed for function. Most loops are anywhere from 3.5 to 10 feet above ground when used in vertical position, with this in mind where should the capacitor be for the best use of this antenna. I have included a drawing of my antenna i am currently building and testing and now I am thinking of placing the capacitor at the top with a long non conducting shaft running through the diameter of the loop to below it. This will remove coax, DC cable, motor and gear box away from the RF field of the loop.

10546. Visallia CA. hamvention:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-03 13:34:01 UTC
From: tomdoubts doubting
Topic: 10546 Message: 10546

IF any one is going to the Visallia CA. hamvention:
stop in and look at the demonstration of the RF PRO-1B shielded magnetic loop antenna.
Understand from a friend that they fantastic special prices for this show.
Also please checkout out the reviews for this antenna:
http://www.eham.net/reviews/detail/9441

10547. shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-07 21:03:46 UTC
From: <dannibou@...>
Topic: 10547 Message: 10547

HI. I want to build a shielded loop but I can't see any reference in the file section. I know that I can make a 1 turn of wire inside a metal loop shield but it need a preamp. Can anyone help? A link to a "how to build" would be appreciated. A google search did return nothing for my project.
Danny

10548. Re: [loopantennas] shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-07 21:18:05 UTC
From: Chris Trask
Topic: 10547 Message: 10548

>
>HI. I want to build a shielded loop but I can't see any reference in the file section. I know that I can
>make a 1 turn of wire inside a metal loop shield but it need a preamp. Can anyone help? A link to a "how
>to build" would be appreciated. A google search did return nothing for my project.
>

You can find my paper on shielded loops in the group files sectio by the name of:

"Shielded Loop Aerials Rev 0.pdf".

And a suitable wideband amplifier is on my web page at:

http://www.home.earthlink.net/~christrask/Paper009.html

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

10549. Re: [loopantennas] shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-07 21:51:23 UTC
From: Richard (Rick) Karlquist
Topic: 10547 Message: 10549

See:

http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

On 4/7/2014 2:03 PM, dannibou@... wrote:
> HI. I want to build a shielded loop but I can't see any reference in the
> file section. I know that I can make a 1 turn of wire inside a metal
> loop shield but it need a preamp. Can anyone help? A link to a "how to
> build" would be appreciated. A google search did return nothing for my
> project.
>
> Danny

10550. Re: [loopantennas] shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-08 16:16:18 UTC
From: <dannibou@...>
Topic: 10547 Message: 10550

Hi Chris. For sure it's a very good preamp but it implies too much coils for me. I have some toroid but can't identify them. Unless you have one readily made for sale. I forgot to mention that my band of interest is AM broadcast and LW. So, a preamp working from 100kHz to 2mHz is all I need. There is no longer AM station in my town. Overload is not an issue.
Thanks
Danny
My blog: dannibou.wordpress.com

10552. Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-14 16:57:39 UTC
From: <ve7sl@...>
Topic: 10552 Message: 10552

I recently read of one claim for greatly improved performance of a shieled loop when changing from RG59 to 3/4" hardline for the loop....same diameter. The conclusion was that the much larger center conductor of the hardline was the reason. Is there any other evidence that might support this?

Steve VE7SL

WEB: The VE7SL Radio Notebook: http://members.shaw.ca/ve7sl/ http://members.shaw.ca/ve7sl/

10553. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-14 20:15:00 UTC
From: Chris Trask
Topic: 10552 Message: 10553

>
>I recently read of one claim for greatly improved performance of a shieled loop when changing from RG59 to
>3/4" hardline for the loop....same diameter. The conclusion was that the much larger center conductor of
>the hardline was the reason. Is there any other evidence that might support this?
>

When I did my in-depth work on loop antennas, I found that as the diameter of the element (NOT the loop diameter) was increased, the efficiency improved. This was a result of the larger cross sectional area of the skin surface of the element, which results in lower bulk losses. The same result can be extrapolated to show that a larger diamer inner element of a shielded loop will have lower bulk losses, therefore better efficiency.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10554. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-14 22:49:45 UTC
From: Steve
Topic: 10552 Message: 10554

Thank you Chris.

>a larger diamer inner element of a shielded loop will have lower bulk
>losses, therefore better efficiency.

would it be something one could notice (measure) on a 10' loop? My present 10' shielded loop uses RG-58 and going to RG-8 or RG-11 would really increase the weight. Is it something worth considering? How would the increased efficiency manifest itself...increased overall system gain...better S/N ratio or ...??

Steve

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10555. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-15 15:14:33 UTC
From: Chris Trask
Topic: 10552 Message: 10555

>
>>a larger diamer inner element of a shielded loop will have lower bulk
>>losses, therefore better efficiency.
>
>would it be something one could notice (measure) on a 10' loop? My present
>10' shielded loop uses RG-58 and going to RG-8 or RG-11 would really
>increase the weight. Is it something worth considering? How would the
>increased efficiency manifest itself...increased overall system
>gain...better S/N ratio or ...??
>

I sent you a couple of files to illustrate how the loop element diameter and frequency affects the efficiency of a non-shielded loop antenna. The results can be extrapolated to understand the effects of using different diameter materials for a shielded loop.

Something that I've been meaning to look into is the overall effrects of the characteristic impedance of the shielded loop element. We often use a small diameter wire for the inner element and sometimes even use 50-ohm coax. But, the terminal impedance of the shielded loop is small, commonly less than 5 ohms. That being the case, the characteristic impedance of the shielded loop element should be the same as the terminal impedance. But, this would be a bit difficult to construct, possibly using 1/2" tubing for the outer element, 5/15" tubing for the inner element, and some plastic tubing for the insulator. Not sure of the benefit of doing this would be worth the effort.

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

10556. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-15 18:18:04 UTC
From: Steve
Topic: 10552 Message: 10556

Thanks for the articles Chris.

My present 10' shielded loop is used only for the BCB and below so much of this would likely not affect my system as much as if it were to be used on higher frequencies,

> But, this would be a bit difficult to construct, possibly using 1/2"
> tubing for the outer element, 5/15" tubing for the inner element, and some
> plastic tubing for the insulator. Not sure of the benefit of doing this
> would be worth the effort.

yes...I agree. I believe Everett constructed a similar high efficiency shielded element but not sure if he was able to compare it with RG8 or RG11 at low frequencies to measure the changes. In a system limited by atmospheric noise levels I'm not sure there is much to be gained by rebuilding my present RG58 shield element. At 10' diameter, anything heavier would eventually suffer storm failure here on the ocean.

Steve

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

10557. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-15 18:37:05 UTC
From: Brian
Topic: 10552 Message: 10557

Chris,
We used 6mm copper tubing with a bonded PVC jacket
for instrumentation lines at work, 10mm overall diameter
so that would fit nicely down 15mm copper water pipe as the loop
Just a thought.
72, Brian, GØNSL.

From: Chris Trask
Sent: Tuesday, April 15, 2014 4:14 PM
To: loopantennas@yahoogroups.com ; loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Shielded Loop Center Element

10558. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-15 21:47:38 UTC
From: Chris Trask
Topic: 10552 Message: 10558

```
>
>Chris,
> We used 6mm copper tubing with a bonded PVC jacket
>for instrumentation lines at work, 10mm overall diameter
>so that would fit nicely down 15mm copper water pipe as the loop
>Just a thought.
> 72, Brian, GØNSL.
>
```

Brian,
That would be an interesting construct for a shielded loop.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10559. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-15 21:49:47 UTC
From: Chris Trask
Topic: 10552 Message: 10559

>
>My present 10' shielded loop is used only for the BCB and below so much of
>this would likely not affect my system as much as if it were to be used on
>higher frequencies,
>
>> But, this would be a bit difficult to construct, possibly using 1/2"
>> tubing for the outer element, 5/15" tubing for the inner element, and some
>> plastic tubing for the insulator. Not sure of the benefit of doing this
>> would be worth the effort.
>
>yes...I agree. I believe Everett constructed a similar high efficiency
>shielded element but not sure if he was able to compare it with RG8 or RG11
>at low frequencies to measure the changes. In a system limited by
>atmospheric noise levels I'm not sure there is much to be gained by
>rebuilding my present RG58 shield element. At 10' diameter, anything heavier
>would eventually suffer storm failure here on the ocean.
>

There may be an indirect advantage. With the bulk resistance reduced, the Q of a series-tuned loop would increase, which would result in a narrower tuned bandwidth and consequently lower received noise power.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10562. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-15 23:52:02 UTC
From: Andy Gardner
Topic: 10552 Message: 10562

PVC wouldn't be good for Q. An HDPE jacket would be far superior.

Maybe there's irrigation pipe available with suitable diameters?

On 16/04/2014, at 6:37 AM, Brian wrote:

>
> Chris,
> We used 6mm copper tubing with a bonded PVC jacket
> for instrumentation lines at work, 10mm overall diameter
> so that would fit nicely down 15mm copper water pipe as the loop
> Just a thought.
> 72, Brian, GØNSL.

10563. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-16 00:21:53 UTC
From: Everett Sharp
Topic: 10552 Message: 10563

Guys,

One of the best things that I have found is PAP pipe (polyethylene - aluminum-polyethylene). I found some 1" on eBay and have used it to build both a 1 meter loop and a 6' diameter shielded loop. By using number 22 magnet wire as the inner conductor, the capacitance was about 7 pF per ft. I have the 6' loop configured in a möbius. It is the best working antenna I have covering from daylight to 33 MHz. It problem will work well above 33 MHz, I just don't have a receiver to listen above that. I plan on building a 7.5 ft loop using 1.5" OD 0.30" aluminum tubing in the next 2 months or so.

The PAP is used primarily in Europe for Gas line feeds and in floor heating. It is very easy to bend.

Everett N8CNP

Sent from my iPad

> On Apr 15, 2014, at 6:52 PM, Andy Gardner <ceo@...> wrote:
>
>
> PVC wouldn't be good for Q. An HDPE jacket would be far superior.
>
> Maybe there's irrigation pipe available with suitable diameters?
>
> On 16/04/2014, at 6:37 AM, Brian wrote:
>
> >
> > Chris,
> > We used 6mm copper tubing with a bonded PVC jacket
> > for instrumentation lines at work, 10mm overall diameter
> > so that would fit nicely down 15mm copper water pipe as the loop
> > Just a thought.
> > 72, Brian, GØNSL.
>
>

10564. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-17 17:47:55 UTC
From: Garey Wittich
Topic: 10552 Message: 10564

Guys:

Wondering what the "advantages / disadvantages" are for a Shielded Loop vs a non-Shielded Loop for the same Loop DIAMETER. I have a "feeling" that one has a better "Q" than the other - implying one has better "UNWANTED" signal rejection.

Garey Wittich Santa Monica,CA

On Tuesday, April 15, 2014 5:21 PM, Everett Sharp <everettsharp@...> wrote:

Guys,

One of the best things that I have found is PAP pipe (polyethylene - aluminum-polyethylene). I found some 1" on eBay and have used it to build both a 1 meter loop and a 6' diameter shielded loop. By using number 22 magnet wire as the inner conductor, the capacitance was about 7 pF per ft. I have the 6' loop configured in a möbius. It is the best working antenna I have covering from daylight to 33 MHz. It problem will work well above 33 MHz, I just don't have a receiver to listen above that. I plan on building a 7.5 ft loop using 1.5" OD 0.30" aluminum tubing in the next 2 months or so.

The PAP is used primarily in Europe for Gas line feeds and in floor heating. It is very easy to bend.

Everett N8CNP

Sent from my iPad

On Apr 15, 2014, at 6:52 PM, Andy Gardner <ceo@...> wrote:

>
>PVC wouldn't be good for Q. An HDPE jacket would be far superior.
>
>Maybe there's irrigation pipe available with suitable diameters?
>
>On 16/04/2014, at 6:37 AM, Brian wrote:
>
>>
>> Chris,
>> We used 6mm copper tubing with a bonded PVC jacket
>> for instrumentation lines at work, 10mm overall diameter
>> so that would fit nicely down 15mm copper water pipe as the loop
>> Just a thought.
>> 72, Brian, GØNSL.
>
>

10565. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-17 18:05:36 UTC
From: Chris Trask
Topic: 10552 Message: 10565

>
>Guys:
>
>Wondering what the "advantages / disadvantages" are for a Shielded Loop vs a non-Shielded Loop for the
>same Loop DIAMETER. I have a "feeling" that one has a better "Q" than the other - implying one has
>better "UNWANTED" signal rejection.
>

Some of the advantages are low frequency noise immunity and isolation from nearby objects. I have a section on the noise immunity on my paper on shielded loops in the group files section.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10566. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-17 18:50:48 UTC
From: Andrew Ikin
Topic: 10552 Message: 10566

Garey wrote on April 17.

Guys:

“Wondering what the "advantages / disadvantages" are for a Shielded Loop vs a non-Shielded Loop for the same Loop DIAMETER. I have a "feeling" that one has a better "Q" than the other - implying one has better "UNWANTED" signal rejection.

Garey Wittich Santa Monica,CA”

Garey,

A balanced 1 turn loop of the some diameter driving into a low z input amplifier will have similar near E field rejection as a screened loop. I did a lot a work with screen and unscreened versions of the ALA1530 in 1997 and to be honest I didn’t see any advantage with shielding. Having to use a smaller diam. conductor increases the loss compared to using a conductor of the same diam. as the screen.

Notwithstanding the above, a screen may be necessary for a tuned or multi-turn loop if it can’t be balanced.

73

Andrew Ikin

.

10568. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-21 13:32:39 UTC
From: <gregella53@...>
Topic: 10552 Message: 10568

A loop antenna primarily responds to the magnetic component of a radio wave. An unshielded loop will also pick up some of the electrical component, and not necessarily in a symmetrical manner. If you want the deepest possible nulls and a symmetrical pattern, either for direction finding or to null out an unwanted signal, a shielded loop is better. Also more immune to local noise.

10569. Re: [loopantennas] Shielded Loop Center Element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-21 15:24:32 UTC
From: Craig F. Simmons
Topic: 10552 Message: 10569

What are you saying, that the loop will work better with the center conductor attached, or what.

On Mon, Apr 21, 2014 at 4:32 PM, <gregella53@gmail.com> wrote:

>
>
> A loop antenna primarily responds to the magnetic component of a radio
> wave. An unshielded loop will also pick up some of the electrical
> component, and not necessarily in a symmetrical manner. If you want the
> deepest possible nulls and a symmetrical pattern, either for direction
> finding or to null out an unwanted signal, a shielded loop is better. Also
> more immune to local noise.
>
>

10570. Applicable to receive loops?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-29 01:20:39 UTC
From: Andy Gardner
Topic: 10570 Message: 10570

Applicable to receive loops?

http://edn.com/design/analog/4430051/Differential-amp-has-6dB-lower-noise--twice-the-bandwidth

Discuss...

10571. Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 14:39:24 UTC
From: <n3ikq@...>
Topic: 10571 Message: 10571

Hi all, I'm experimenting with various remotely tuned open air loops and ferrite loopsticks. I have made a remotely tuned varicap diode assembly and a remotely tuned variable capacitor assembly (using a stepping motor w/arduino). I intend to experiment with each on my 4x4 open air box loop and soon a loopstick as well. I am also building up a differential preamp so I will not have to bother with a second pick up loop. My question is: What is the disadvantage of using varicaps (in pairs) compared with using a variable capacitor to tune a loop? Do varicaps have any tendency to overload or buckle under strong noise conditions? Put another way, Does the mechanical complexity of a remotely tuned variable capacitor provide any advantages over varicap diodes with all other things being equal? According to circuits I have obtained on the net, I can drive a differential preamp with either setup. A thorough search of the net has not provided me any data concerning my question. My only conclusion to date is that my stepping motor imparts significant noise into the antenna when it is operating. This is not actually a bad thing in that it tends to serve as a tuning aid when using a traditional receiver. Of course when using an SDR with a spectrum scope, the noise is a distraction because one can see the antenna peak moving along the frequency domain as it is tuned. Any thoughts welcome!

10572. Re: [loopantennas] Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 15:15:26 UTC
From: Chris Trask
Topic: 10571 Message: 10572

>
>Hi all, I'm experimenting with various remotely tuned open air loops and ferrite loopsticks. I have made
>a remotely tuned varicap diode assembly and a remotely tuned variable capacitor assembly (using a
>stepping motor w/arduino). I intend to experiment with each on my 4x4 open air box loop and soon a
>loopstick as well. I am also building up a differential preamp so I will not have to bother with a second
>pick up loop. My question is: What is the disadvantage of using varicaps (in pairs) compared with using a
>variable capacitor to tune a loop? Do varicaps have any tendency to overload or buckle under strong noise
>conditions? Put another way, Does the mechanical complexity of a remotely tuned variable capacitor provide
>any advantages over varicap diodes with all other things being equal? According to circuits I have obtained
>on the net, I can drive a differential preamp with either setup. A thorough search of the net has not
>provided me any data concerning my question. My only conclusion to date is that my stepping motor imparts
>significant noise into the antenna when it is operating. This is not actually a bad thing in that it tends
>to serve as a tuning aid when using a traditional receiver. Of course when using an SDR with a spectrum
>scope, the noise is a distraction because one can see the antenna peak moving along the frequency domain
>as it is tuned. Any thoughts welcome!
>

Varicaps can produce serious IMD products when used for remote antenna tuning, especially in the presence of strong nearby broadcast stations. Variable capacitors will always give far better performance in those circumstances. Varicaps will also degrade the equivalent antenna noise temperature due to finite bulk resistance, whereas variable capacitors have little if any series resistance.

I have not gone to the trouble of doing a comparison between the two, I just know from experience about the IMD problems of varicaps. I have recently devised a single variable capacitor approach to tuning a loop antenna, and if I can ever get my act in gear I'll publish it online as I have done with other designs.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10573. Re: [loopantennas] Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 15:26:34 UTC
From: Richard (Rick) Karlquist
Topic: 10571 Message: 10573

On 4/30/2014 7:39 AM, n3ikq@... wrote:

> Put another way, Does the mechanical complexity of a remotely tuned
> variable capacitor provide any advantages over varicap diodes with all

Varicaps definitely can rectify and create QRM from strong
signals, be they AM BCB stations or nearby ham stations
or if you are running SO2R. The back to back configuration
helps but you can still have rectification.

You said you were using a preamp. Preamps also create
their own intermod so it can be hard to determine whether
any given intermod is due to the preamp or varicaps.
This includes built in preamps in radios. The IC706
preamp is bad for this.

Rick N6RK

10574. Re: Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 16:46:36 UTC
From: <n3ikq@...>
Topic: 10571 Message: 10574

Wow answers from the living legends themselves! I have a few of your documents in my files that I have been educating myself from! The balanced (differential) preamp I am gathering parts for is from a paper by Lyle Koehler. It seems to be a variation on a common design as it appears to be used by at least two of the three builders of commercial loopstick antennas. I am guessing the balanced, center tapped loop design allows the loop (or interchangeable coils) to be grounded thereby protecting the FETs from ESD. Anyway thanks for the great feedback. I was guessing that the varicaps had some sort of Achilles heel that keeps the antenna builders looking for good old fashioned variable caps. My remote variable capacitor design is nothing earth shattering but I have made it to use standard cat5 cable and cheap eBay stepper motors from China. I use the three left over cat5 wires for positional feedback from a pot attached to the cap. All 8 wires get used and cat5 cables are everywhere so no custom cables need to be built.

10575. Re: [loopantennas] Re: Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 17:01:31 UTC
From: Chris Trask
Topic: 10571 Message: 10575

>
>Wow answers from the living legends themselves! I have a few of your documents in my files that I have
>been educating myself from! The balanced (differential) preamp I am gathering parts for is from a paper
>by Lyle Koehler.
>

Is that the one with the balanced MPF102 input stage and a balanced 2N2907 output stage? I have reservations about that approach as the low impedance of a loop pretty much dictates a low input impedance amplifier with series tuning. His design is more appropriate for use with a short dipole, which can be a pretty good small antenna. But, his amplifier is fairly simple.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10576. Re: Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 17:46:14 UTC
From: <n3ikq@...>
Topic: 10571 Message: 10576

Yes, that's the circuit. http://www.lowfer.us/k0lr/bal-pre/bal-pre.htm http://www.lowfer.us/k0lr/bal-pre/bal-pre.htm. I thought the point was to have such a high impedance that the loop/inductor was not effected by the directly attached preamp. Another interesting design is from the late Ralph Burhans. I bought and used his preamp way back in the 80's and lost it. I was happy to find the design again. However, it is not a tuned design and I'm not quite sure if I can just slap a tank circuit on the transformer input. http://members.shaw.ca/ve7sl/burhans.html http://members.shaw.ca/ve7sl/burhans.html

10577. Re: [loopantennas] Re: Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 18:09:11 UTC
From: Chris Trask
Topic: 10571 Message: 10577

>
>Yes, that's the circuit. http://www.lowfer.us/k0lr/bal-pre/bal-pre.htm
>http://www.lowfer.us/k0lr/bal-pre/bal-pre.htm. I thought the point was to
>have such a high impedance that the loop/inductor was not effected by the
>directly attached preamp. Another interesting design is from the late
>Ralph Burhans. I bought and used his preamp way back in the 80's and lost
>it. I was happy to find the design again. However, it is not a tuned design
>and I'm not quite sure if I can just slap a tank circuit on the transformer
>input. http://members.shaw.ca/ve7sl/burhans.html
>http://members.shaw.ca/ve7sl/burhans.html
>

I'll look at that later when I have a WiFi connection. The loop antenna is best viewd as being a current source with a series inductance and a low series resistance. When seen that way, series tuning with a low input impedance amplifier becomes obvious.

I think I placed a 1- or 2-page PDF files in the group files section that showed schematics for simple active antenna amplifiers using the CA3046 transistor array. If not, I'll look around the see where I put it. It's not on my office computer, so it must be on the laptop.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10578. Re: [loopantennas] Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 19:43:19 UTC
From: T. Hills
Topic: 10571 Message: 10578

I've been using varactors for MW and LW loops for years. There are a couple of things to be careful of.

When using a back to back configuration I've found it best to match them as closely as possible. An imbalance increases the chances of IMD and other problems.

The lower the signal level across the varactors the better. I use set of 4 pairs (8 total) MVAM109s to tune a ferrite loop and have used as many as 10 pairs (20 total) for a LW air core. The higher capacitance allows for fewer windings and lower AC voltage across the junctions and matching is easier if 4 parallel varactors are matched to 4 others. I got lucky and bought 300 of them for next to nothing, rejected lot with 50 of them being defective but I still see those or similar in bulk on Ebay from time to time.

I also use a second center tapped pickup loop with a balanced MOSFET preamp feeding a balanced line to the receiver. Even with 3 BC stations close enough to hear on the toaster I don't get any noticeable intermod.

I prefer varactors mostly because I stick to the KISS principle as much as possible. A well regulated reference voltage, a 10 turn pot, a single op-amp, a few resistors and caps and one wire is all that's needed for control.

I've heard of people having problems with varying ambient conditions. The attic above the garage where the loop was mounted goes from -30F in winter to over 140F in the summer. The antenna is "noisier" the hotter it gets but I can say the same for any MW antenna since atmospheric noise in this region is very high from April to October so it may be junction noise or it may just be background/thunderstorms. Probably a combination.

HTH
Tim Hills
Sioux Falls, SD
On 4/30/2014 9:39 AM, n3ikq@... wrote:
>
> Hi all, I'm experimenting with various remotely tuned open air loops
> and ferrite loopsticks. I have made a remotely tuned varicap diode
> assembly and a remotely tuned variable capacitor assembly (using a
> stepping motor w/arduino). I intend to experiment with each on my 4x4
> open air box loop and soon a loopstick as well. I am also building up
> a differential preamp so I will not have to bother with a second pick
> up loop. My question is: What is the disadvantage of using varicaps
> (in pairs) compared with using a variable capacitor to tune a loop?

> Do varicaps have any tendency to overload or buckle under strong noise
> conditions? Put another way, Does the mechanical complexity of a
> remotely tuned variable capacitor provide any advantages over varicap
> diodes with all other things being equal? According to circuits I have
> obtained on the net, I can drive a differential preamp with either
> setup. A thorough search of the net has not provided me any data
> concerning my question. My only conclusion to date is that my stepping
> motor imparts significant noise into the antenna when it is operating.
> This is not actually a bad thing in that it tends to serve as a tuning
> aid when using a traditional receiver. Of course when using an SDR
> with a spectrum scope, the noise is a distraction because one can see
> the antenna peak moving along the frequency domain as it is tuned. Any
> thoughts welcome!
>
> _

10579. Re: [loopantennas] Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-04-30 22:54:05 UTC
From: Richard (Rick) Karlquist
Topic: 10571 Message: 10579

On 4/30/2014 7:39 AM, n3ikq@... wrote:

> Put another way, Does the mechanical complexity of a remotely tuned
> variable capacitor provide any advantages over varicap diodes with all

One other problem with varactors is testing. The loop design
I published in the National Contest Journal cannot be tested
with the MFJ-259 impedance meter (and probably similar units)
because the drive level is too high. I only recently discovered
this. I did all the development work originally with an
HP 4815 vector impedance meter. I also found that if I
used an Agilent E5071C VNA, I had to reduce the drive level
below the default level of the instrument.

Rick N6RK

10580. Re: [loopantennas] Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-01 01:10:03 UTC
From: T. Hills
Topic: 10571 Message: 10580

On 4/30/2014 5:54 PM, Richard (Rick) Karlquist wrote:
>
>
>
> On 4/30/2014 7:39 AM, n3ikq@... wrote:
>
> > Put another way, Does the mechanical complexity of a remotely tuned
> > variable capacitor provide any advantages over varicap diodes with all
>
> One other problem with varactors is testing. The loop design
> I published in the National Contest Journal cannot be tested
> with the MFJ-259 impedance meter (and probably similar units)
> because the drive level is too high. I only recently discovered
> this. I did all the development work originally with an
> HP 4815 vector impedance meter. I also found that if I
> used an Agilent E5071C VNA, I had to reduce the drive level
> below the default level of the instrument.
>
> Rick N6RK
>
> _
When I measured the batch I got I built a buffered VCO with the L.O. coil from an old MW radio using a socket for the varactors to test the frequency output at 12 discrete voltages using a 12 position switch and resistors.

Fed the output to my scope and the output from the scope to a cheap frequency counter. A bit of Math (and a spreadsheet) gave me the cap. values at different voltages and monitoring the waveform on the scope showed if they were noisy or unstable. Neither the scope or the counter had to be NBS traceable or anything since I was comparing apples to apples so to speak and in circuit stray capacitance would be more than the measurement error anyway.

Still have the test jig around here somewhere....

Tim Hills
Sioux Falls, SD

10581. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-01 11:46:52 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10581

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10582. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-01 11:46:52 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10582

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10583. Re: [loopantennas] Re: Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-01 13:49:18 UTC
From: Chris Trask
Topic: 10571 Message: 10583

>
> I think I placed a 1- or 2-page PDF files in the group files section that showed schematics for
>simple active antenna amplifiers using the CA3046 transistor array. If not, I'll look around the see
>where I put it. It's not on my office computer, so it must be on the laptop.
>

I found that file in the group files section. The title is:

Active Antenna Amplifiers for Low Voltage Operation RevA.pdf

Although the designs are for low-voltage operation, they can be used for supply voltages up to 12V. For practical purposes, the schematic on the second page is probably the most suitable, and the one on the third page is for demanding situations where even-order distortion from strong signals is a serious problem.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10584. Re: Applicable to receive loops?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-01 18:36:34 UTC
From: <3ym3ym@...>
Topic: 10570 Message: 10584

This may be interesting for LW and VLF/ELF work. I suspect that above 1MHz other effects and non-idealities swamp the common mode rejection ratio of the amplifier.

73, Mike

10585. MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-05 11:32:51 UTC
From: Alan Sutherland
Topic: 10585 Message: 10585

Hi All:

Before moving to an apartment with balcony, where the MFJ loop will stick out like a sore thumb, I need to paint its black ABS housing white or another light color.
MFJ advise us not to use a paint containing metal.
I have researched and found that nearly all exterior paints, in Europe at least, where I live, contain titanium dioxide or zinc oxide.
Is the concentration of TiO2 so small and dispersion so great that it does not affect tuning of the loop?
Does anyone have experience of painting this housing?
Please share your experience or ideas with me and others.
73
Alan DH2AS (G4HEQ in UK)

10586. Re: MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-07 00:04:36 UTC
From: <graemes2@...>
Topic: 10585 Message: 10586

Why not tape it with the required colour?

10587. Re: [loopantennas] Re: MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-07 00:16:34 UTC
From: Andy Gardner
Topic: 10585 Message: 10587

Ooooooo. There's an idea. Teflon tape!

On 7/05/2014, at 12:04 PM, <graemes2@...> wrote:

> Why not tape it with the required colour?
>

10588. Re: [loopantennas] Re: MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-07 00:19:09 UTC
From: Don Sanders
Topic: 10585 Message: 10588

Slick Idea!
Don W4BWS

On Tue, May 6, 2014 at 7:16 PM, Andy Gardner <ceo@andygardner.com> wrote:

>
>
>
> Ooooooo. There's an idea. Teflon tape!
>
>
> On 7/05/2014, at 12:04 PM, <graemes2@...> wrote:
>
> > Why not tape it with the required colour?
> >
>
>
>

--
Dr. Don W4BWS

10589. Re: [loopantennas] Re: MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-09 12:07:53 UTC
From: Alan Sutherland
Topic: 10585 Message: 10589

Thanks for the taping idea for the black housing of the loop. That would probably be the last resort! The loop will be exposed on the balcony in this continental climate; the tape would probably become messy and short lived. But maybe worth a try.
Some people have successfully painted the housing.
73
Alan DH2AS (G4HEQ)

On Wednesday, May 7, 2014 2:19 AM, Don Sanders <w4bws1@...> wrote:

Slick Idea!
Don W4BWS

On Tue, May 6, 2014 at 7:16 PM, Andy Gardner <ceo@...> wrote:

>
>
>Oooooo. There's an idea. Teflon tape!
>
>
>On 7/05/2014, at 12:04 PM, <graemes2@...> wrote:
>
>> Why not tape it with the required colour?
>>
>
>

--
Dr. Don W4BWS

10590. Re: [loopantennas] MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-09 15:42:51 UTC
From: Richard (Rick) Karlquist
Topic: 10585 Message: 10590

I think when they said "metal" the meant the elemental form
of the metal, not a compound like TiO. In any event, I
would not worry about the effect of paint, because it will
be negligible compared to ABS pipe, which is a low quality
dielectric.

Rick N6RK

On 5/5/2014 4:32 AM, Alan Sutherland wrote:
> Hi All:
>
> Before moving to an apartment with balcony, where the MFJ loop will
> stick out like a sore thumb, I need to paint its black ABS housing white
> or another light color.
> MFJ advise us not to use a paint containing metal.
> I have researched and foun! d that nearly all exterior paints, in Europe
> at least, where I live, contain titanium dioxide or zinc oxide.
> Is the concentration of TiO2 so small and dispersion so great that it
> does not affect tuning of the loop?
> Does anyone have experience of painting this housing?
> Please share your experience or ideas with me and others.
> 73
> Alan DH2AS (G4HEQ in UK)
>
>

10591. Re: [loopantennas] MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-09 16:35:12 UTC
From: Frans.Vink@...
Topic: 10585 Message: 10591

As a chemist I would agree, metal oxides etc. do not inherit ANY metal free electron behaviour and would therefore not have a negative effect. I would expect they mean 'Metallic' paint, that actually contains small metal particles to give the shiny appeal.

Hope this helps,

Frans

10592. Re: [loopantennas] MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-10 06:10:28 UTC
From: alan.sutherland43@...
Topic: 10585 Message: 10592

Hi Frans, Rick and all who responded:

This is very reassuring and I will probably use an exterior wall paint of matching color.
That is what IZ0FYS has done in Italy. His QRZ.com page shows photos.

Frans, if I use a primer spray with <50% acetone, do you think it would soften the ABS plastic?
The black cover is a supporting part of the structure and I would not want to weaken it.

73

Alan DH2AS (G4HEQ)

10593. Re: MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-10 06:37:14 UTC
From: gnuarm.2006@...
Topic: 10585 Message: 10593

The acetone in paint or primer evaporates very quickly and so has little chance to permeate the substrate. I did a search for ABS and Acetone and found some interesting info on using a heated acetone vapor to smooth ABS printed parts where they left the parts in the vapors for an hour or more. From what I saw I think you will be very safe with the paint.

Rick

10594. Re: [loopantennas] Re: MFJ-1788 housing needs painting

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-10 08:16:53 UTC
From: Alan Sutherland
Topic: 10585 Message: 10594

Thanks, Rick. This forum is very useful!
73
Alan DH2AS (G4HEQ)

On Saturday, May 10, 2014 8:37 AM, "gnuarm.2006@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

The acetone in paint or primer evaporates very quickly and so has little chance to permeate the substrate. I did a search for ABS and Acetone and found some interesting info on using a heated acetone vapor to smooth ABS printed parts where they left the parts in the vapors for an hour or more. From what I saw I think you will be very safe with the paint.

Rick

10595. Going to DAYTON next week?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-12 16:40:33 UTC
From: tomdoubts doubting
Topic: 10585 Message: 10595

Drop by our booth #488
Take a look at the Pixel RF-PRO-1B RECEIVE Magnetic Loop - watch the live demonstration.
We will also will have information available on the new incarnation of the BEVERAGE Antenna
4-in-1 design --- Beverage, Beverage on (under) Ground, Flag, and inverted EWE

10596. Fw: Painting the MFJ loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-24 11:56:56 UTC
From: Alan Sutherland
Topic: 10596 Message: 10596

On Saturday, May 24, 2014 1:51 PM, Alan Sutherland <alan.sutherland43@gmail.com> wrote:

After much research on the Web and useful advice from members, I painted the black housing of my MFJ loop white, using a good quality acrylic paint. My concerns were about the titanium dioxide TiO2 pigment in the paint. Other members assured me this is not metal in the sense of free electrons that could interfere with tuning.
The loop has now been tested and tunes up well on its intended bands. It stands out much less on the balcony of a white apartment building, once we move there.

73 and thanks again to all who contributed.

Alan DH2AS (G4HEQ)

10597. Best ferrite matierial for tropical band?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-05-30 12:55:46 UTC
From: n3ikq@...
Topic: 10597 Message: 10597

I've built a stand alone LF and bcb loopstick antenna (basically a Palstar LA30 clone) using type 33 and 61 ferrite rods for LF and BCB. So far so good, it works great. To finish up the project I'd like to build a tropical band plug in as well. What would be the best type 7.5 inch ferrite rod and Litz for higher frequencies into the tropical bands? I'm thinking that type 61 would work but there is a type 43 on eBay right now supposedly good for >2Mhz. Thanks for any advice.

10598. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-01 12:09:22 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10598

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10599. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-01 12:09:22 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10599

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10608. References on passive broadband small loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-06 05:53:18 UTC
From: pu3hag.l@gmail.com
Topic: 10608 Message: 10608

Hello,

I'm planning to experiment with a small loop (circular shape, 1 meter dia) passively connected to the 50R feed line. It'd be used for reception in LF and MF bands.

I was checking the web and found diagrams and notes recommending step up transformer ranging from 1:10 to 1:100.

Would you recall any references discussing this type of loop and the needed step up xmfr?

All tips and suggestions are welcome!

Thank you,

-- pu3hag huelbe

Sent from my iPhone

10609. Re: [loopantennas] References on passive broadband small loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-06 06:17:56 UTC
From: Andy
Topic: 10608 Message: 10609

I don't have references handy. But I think the reason for the step-up transformer, is because the small loop has an exceedingly low radiation resistance, and one gets better power transfer with the step-up XFMR. You get the most power transfer from antenna to receiver when you have a conjugate impedance match, and the step-up comes closer to matching the real component. If there is also a tuning capacitor in there, that might also help, but maybe not necessary for an RX-only antenna.

On LF and MF, maximum power transfer (a perfect match) is not needed because background noise tends to dominate. (i.e., more signal from the antenna does not give you more S/N.) But if the mismatch is too great, the received signal may be so low that the S/N suffers. So the XFMR helps with that.

That'd be my guess.

Regards,
Andy

10610. Re: [loopantennas] References on passive broadband small loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-06 06:25:06 UTC
From: Maxwell Mclellan
Topic: 10608 Message: 10610

Greetings from vk2tti,
Is the loop to be
* single or multi turn or
* tuned with capacitor?
with regards.

Sent from my iPad

> On 6 Jun 2014, at 3:53 pm, "'pu3hag.l@...' pu3hag.l@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Hello,
>
> I'm planning to experiment with a small loop (circular shape, 1 meter dia) passively connected to the 50R feed line. It'd be used for reception in LF and MF bands.
>
> I was checking the web and found diagrams and notes recommending step up transformer ranging from 1:10 to 1:100.
>
> Would you recall any references discussing this type of loop and the needed step up xmfr?
>
> All tips and suggestions are welcome!
>
> Thank you,
>
> -- pu3hag huelbe
>
> Sent from my iPhone
>
>

10611. Re: [loopantennas] References on passive broadband small loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-06 06:32:33 UTC
From: pu3hag.l@gmail.com
Topic: 10608 Message: 10611

Hi Max. It'd be a single turn, 1 meter diameter or a bit more, untuned. The loop terminal would be connected to a step up xmfr.

Sent from my iPhone

On Jun 6, 2014, at 3:25 AM, "Maxwell Mclellan vk2tti@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Greetings from vk2tti,
Is the loop to be
* single or multi turn or
* tuned with capacitor?
with regards.

Sent from my iPad

> On 6 Jun 2014, at 3:53 pm, "'pu3hag.l@...' pu3hag.l@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>
> Hello,
>
> I'm planning to experiment with a small loop (circular shape, 1 meter dia) passively connected to the 50R feed line. It'd be used for reception in LF and MF bands.
>
> I was checking the web and found diagrams and notes recommending step up transformer ranging from 1:10 to 1:100.
>
> Would you recall any references discussing this type of loop and the needed step up xmfr?
>
> All tips and suggestions are welcome!
>
> Thank you,
>
> -- pu3hag huelbe
>
> Sent from my iPhone
>

10612. Re: [loopantennas] References on passive broadband small loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-06 06:32:56 UTC
From: pu3hag.l@gmail.com
Topic: 10608 Message: 10612

Thank you for the insights, Andy!

Sent from my iPhone

On Jun 6, 2014, at 3:17 AM, "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

I don't have references handy. But I think the reason for the step-up transformer, is because the small loop has an exceedingly low radiation resistance, and one gets better power transfer with the step-up XFMR. You get the most power transfer from antenna to receiver when you have a conjugate impedance match, and the step-up comes closer to matching the real component. If there is also a tuning capacitor in there, that might also help, but maybe not necessary for an RX-only antenna.

On LF and MF, maximum power transfer (a perfect match) is not needed because background noise tends to dominate. (i.e., more signal from the antenna does not give you more S/N.) But if the mismatch is too great, the received signal may be so low that the S/N suffers. So the XFMR helps with that.

That'd be my guess.

Regards,
Andy

10613. Re: [loopantennas] References on passive broadband small loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-06 06:45:34 UTC
From: Maxwell Mclellan
Topic: 10608 Message: 10613

G'day again, I would suggest that you construct a temporary transformer using a split ferrite clip on device. Used to clamp on cables for interference reduction. It is much easier to wind different ratios on a split ferrite than on a toroid type. However, I think you might be disappointed with the results from a single turn loop. Give it a go by all means. Regards again Max vk2tti.

Sent from my iPad

> On 6 Jun 2014, at 4:32 pm, "'pu3hag.l@gmail.com' pu3hag.l@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Hi Max. It'd be a single turn, 1 meter diameter or a bit more, untuned. The loop terminal would be connected to a step up xmfr.
>
> Sent from my iPhone
>
> On Jun 6, 2014, at 3:25 AM, "Maxwell Mclellan vk2tti@optusnet.com.au [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>
> Greetings from vk2tti,
> Is the loop to be
> * single or multi turn or
> * tuned with capacitor?
> with regards.
>
> Sent from my iPad
>
>> On 6 Jun 2014, at 3:53 pm, "'pu3hag.l@...' pu3hag.l@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>>
>>
>> Hello,
>>
>> I'm planning to experiment with a small loop (circular shape, 1 meter dia) passively connected to the 50R feed line. It'd be used for reception in LF and MF bands.
>>
>> I was checking the web and found diagrams and notes recommending step up transformer ranging from 1:10 to 1:100.
>>
>> Would you recall any references discussing this type of loop and the needed step up xmfr?
>>
>> All tips and suggestions are welcome!
>>

```
>> Thank you,
>>
>> -- pu3hag huelbe
>>
>> Sent from my iPhone
>>
>
>
```

10614. Re: [loopantennas] References on passive broadband small loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-06 20:56:11 UTC
From: pu3hag.l@gmail.com
Topic: 10608 Message: 10614

Thank you Max! Split cores are a brilliant idea! Huelbe

Sent from my iPhone

On Jun 6, 2014, at 3:45 AM, "Maxwell Mclellan vk2tti@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

G'day again, I would suggest that you construct a temporary transformer using a split ferrite clip on device. Used to clamp on cables for interference reduction. It is much easier to wind different ratios on a split ferrite than on a toroid type. However, I think you might be disappointed with the results from a single turn loop. Give it a go by all means. Regards again Max vk2tti.

Sent from my iPad

> On 6 Jun 2014, at 4:32 pm, "'pu3hag.l@...' pu3hag.l@gmail.com [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>
> Hi Max. It'd be a single turn, 1 meter diameter or a bit more, untuned. The loop terminal would be connected to a step up xmfr.
>
> Sent from my iPhone
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> On Jun 6, 2014, at 3:25 AM, "Maxwell Mclellan vk2tti@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
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>
> Greetings from vk2tti,
> Is the loop to be
> * single or multi turn or
> * tuned with capacitor?
> with regards.
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>>
>> Hello,
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>> I'm planning to experiment with a small loop (circular shape, 1 meter dia) passively connected to the 50R feed line. It'd be used for reception in LF and MF bands.
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>> I was checking the web and found diagrams and notes recommending step up transformer

ranging from 1:10 to 1:100.
>>
>> Would you recall any references discussing this type of loop and the needed step up xmfr?
>>
>> All tips and suggestions are welcome!
>>
>> Thank you,
>>
>> -- pu3hag huelbe
>>
>> Sent from my iPhone
>>

10615. Ala 100la antenna question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-10 15:49:11 UTC
From: ferrox4@...
Topic: 10615 Message: 10615

Hi. I have a wellbrook ala100. La (large aperture) loop antenna. I purchased this about 3 or 4 years ago and I'm finally getting around to really using it. My question is can I feed it with 300 ohm twin lead??. I have two rolls of this lead in and I would like to put it to good use instead of purchasing coax. Thankyou. John

Sent from my iPhone

10616. Re: [loopantennas] Ala 100la antenna question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-10 16:19:25 UTC
From: Andrew Ikin
Topic: 10615 Message: 10616

Hello John,

Under no circumstances use 300 Ohm twin lead.

There are 3 issues to consider:

A reverse polarity on the feeder would damage the head Amp.

If you get it to work, there may be instability.

The feeder will be un-balanced and pick up local noise.

Kind regards

Andrew

Andrew Ikin e-mail: sales@...
andy@...
URL: http://www.wellbrook.uk.com

Wellbrook Communications

From: mailto:loopantennas@...m
Sent: Tuesday, June 10, 2014 4:49 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Ala 100la antenna question

Hi. I have a wellbrook ala100. La (large aperture) loop antenna. I purchased this about 3 or 4 years ago and I'm finally getting around to really using it. My question is can I feed it with 300 ohm twin lead??. I have two rolls of this lead in and I would like to put it to good use instead of purchasing coax. Thankyou. John

Sent from my iPhone

10617. Re: [loopantennas] Ala 100la antenna question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-10 16:40:11 UTC
From: ferrox4@...
Topic: 10615 Message: 10617

Thanks Andy!! You're right I forgot all about the voltage feed. Glad I asked. While I have your ear. I have an older wellbrook " - center" power supply and I have a newer + center power unit. Is it true that I can use either of these with the antenna unit as long as I have the polaritys correct on the power unit I.e. - center walkway with negative center power unit. + center power unit with positive center power unit

Sent from my iPhone

> On Jun 10, 2014, at 12:19 PM, "Andrew Ikin andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Hello John,
>
> Under no circumstances use 300 Ohm twin lead.
>
> There are 3 issues to consider:
>
> A reverse polarity on the feeder would damage the head Amp.
>
> If you get it to work, there may be instability.
>
> The feeder will be un-balanced and pick up local noise.
>
> Kind regards
>
> Andrew
>
> Andrew Ikin e-mail: sales@...
> andy@...
> URL: http://www.wellbrook.uk.com
>
> Wellbrook Communications
>
>
> From: mailto:loopantennas@yahoogroups.com
> Sent: Tuesday, June 10, 2014 4:49 PM
> To: loopantennas@yahoogroups.com
> Subject: [loopantennas] Ala 100la antenna question
>
>
> Hi. I have a wellbrook ala100. La (large aperture) loop antenna. I purchased this about 3 or 4 years ago and I'm finally getting around to really using it. My question is can I feed it with 300 ohm twin lead??. I have two rolls of this lead in and I would like to put it to good use instead of purchasing coax. Thankyou. John
>

> Sent from my iPhone
>
>

10618. Re: [loopantennas] Ala 100la antenna question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-10 18:25:38 UTC
From: Andrew Ikin
Topic: 10615 Message: 10618

John,

The polarity of the Interface and power supply must be the same. If you get it wrong the series diode on the older interface (-ve inner) will protect the loop from a reverse voltage. The newer (+ve inner) has a protection diode that will pull the resettable fuse.

Kind regards

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 10, 2014 5:40 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Ala 100la antenna question

Thanks Andy!! You're right I forgot all about the voltage feed. Glad I asked. While I have your ear. I have an older wellbrook " - center" power supply and I have a newer + center power unit. Is it true that I can use either of these with the antenna unit as long as I have the polaritys correct on the power unit I.e. - center walkway with negative center power unit. + center power unit with positive center power unit

Sent from my iPhone

On Jun 10, 2014, at 12:19 PM, "Andrew Ikin andrew.ikin@btconnect.com [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Hello John,

Under no circumstances use 300 Ohm twin lead.

There are 3 issues to consider:

A reverse polarity on the feeder would damage the head Amp.

If you get it to work, there may be instability.

The feeder will be un-balanced and pick up local noise.

Kind regards

Andrew

Andrew Ikin e-mail: sales@...
andy@...
URL: http://www.wellbrook.uk.com

Wellbrook Communications

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 10, 2014 4:49 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Ala 100la antenna question

Hi. I have a wellbrook ala100. La (large aperture) loop antenna. I purchased this about 3 or 4 years ago and I'm finally getting around to really using it. My question is can I feed it with 300 ohm twin lead??. I have two rolls of this lead in and I would like to put it to good use instead of purchasing coax. Thankyou. John

Sent from my iPhone

10619. Re: [loopantennas] Ala 100la antenna question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-10 19:31:07 UTC
From: ferrox4@...
Topic: 10615 Message: 10619

Hi Andy understood, but the actual active antenna portion or the "active antenna head" doesn't matter if it's getting the older -ve center voltage setup or the newer +ve center voltage setup. Is that correct?

Sent from my iPhone

> On Jun 10, 2014, at 2:25 PM, "Andrew Ikin andrew.ikin@...m [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> John,
>
> The polarity of the Interface and power supply must be the same. If you get it wrong the series diode on the older interface (-ve inner) will protect the loop from a reverse voltage. The newer (+ve inner) has a protection diode that will pull the resettable fuse.
>
> Kind regards
>
> Andrew
>
>
> From: mailto:loopantennas@yahoogroups.com
> Sent: Tuesday, June 10, 2014 5:40 PM
> To: loopantennas@yahoogroups.com
> Subject: Re: [loopantennas] Ala 100la antenna question
>
>
> Thanks Andy!! You're right I forgot all about the voltage feed. Glad I asked. While I have your ear. I have an older wellbrook " - center" power supply and I have a newer + center power unit. Is it true that I can use either of these with the antenna unit as long as I have the polaritys correct on the power unit I.e. - center walkway with negative center power unit. + center power unit with positive center power unit
>
> Sent from my iPhone
>
>> On Jun 10, 2014, at 12:19 PM, "Andrew Ikin andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>>
>>
>> Hello John,
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>> Under no circumstances use 300 Ohm twin lead.
>>
>> There are 3 issues to consider:
>>
>> A reverse polarity on the feeder would damage the head Amp.

>>
>> If you get it to work, there may be instability.
>>
>> The feeder will be un-balanced and pick up local noise.
>>
>> Kind regards
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>> Andrew
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>> Andrew Ikin e-mail: sales@...
>> andy@...
>> URL: http://www.wellbrook.uk.com
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>> Wellbrook Communications
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>> From: mailto:loopantennas@yahoogroups.com
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>> To: loopantennas@yahoogroups.com
>> Subject: [loopantennas] Ala 100la antenna question
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>>
>> Sent from my iPhone
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>
>

10620. Re: [loopantennas] Ala 100la antenna question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-10 21:12:36 UTC
From: Andrew Ikin
Topic: 10615 Message: 10620

John,

The active portion is in the Head Amp., so it doesn’t matter which interface you use. The exception to this is with the ALA1530S+ and the ALA330S which have a 2 transformer Balanced Norton amplifier (2 x 2N4401) in the Interface to provide an extra 9dB gain with a +55dBm OIP3.

Btw, it was one of Chris Trask’s papers that suggested the 2N4401 for exceptional linear applications! However, the On semiconductor manufacture appears to be the best. Unfortunately the complement On Semi 2N4403 (T092) is now obsolete.

Kind regards

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 10, 2014 8:31 PM
To: loopantennas@...m
Subject: Re: [loopantennas] Ala 100la antenna question

Hi Andy understood, but the actual active antenna portion or the "active antenna head" doesn't matter if it's getting the older -ve center voltage setup or the newer +ve center voltage setup. Is that correct?

Sent from my iPhone

On Jun 10, 2014, at 2:25 PM, "Andrew Ikin andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

John,

The polarity of the Interface and power supply must be the same. If you get it wrong the series diode on the older interface (-ve inner) will protect the loop from a reverse voltage. The newer (+ve inner) has a protection diode that will pull the resettable fuse.

Kind regards

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 10, 2014 5:40 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Ala 100la antenna question

Thanks Andy!! You're right I forgot all about the voltage feed. Glad I asked. While I have your ear. I have an older wellbrook " - center" power supply and I have a newer + center power unit. Is it true that I can use either of these with the antenna unit as long as I have the polaritys correct on the power unit I.e. - center walkway with negative center

power unit. + center power unit with positive center power unit

Sent from my iPhone

On Jun 10, 2014, at 12:19 PM, "Andrew Ikin andrew.ikin@btconnect.com [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Hello John,

Under no circumstances use 300 Ohm twin lead.

There are 3 issues to consider:

A reverse polarity on the feeder would damage the head Amp.

If you get it to work, there may be instability.

The feeder will be un-balanced and pick up local noise.

Kind regards

Andrew

Andrew Ikin e-mail: sales@...
andy@wellbrook.uk.com
URL: http://www.wellbrook.uk.com

Wellbrook Communications

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 10, 2014 4:49 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Ala 100la antenna question

Hi. I have a wellbrook ala100. La (large aperture) loop antenna. I purchased this about 3 or 4 years ago and I'm finally getting around to really using it. My question is can I feed it with 300 ohm twin lead??. I have two rolls of this lead in and I would like to put it to good use instead of purchasing coax. Thankyou. John

Sent from my iPhone

10621. Re: [loopantennas] Ala 100la antenna question

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-11 01:01:04 UTC
From: J Ferrow
Topic: 10615 Message: 10621

Thanks again Andrew. Yes i'm dealing with the ala 100 large aperture, but its good to know re the ALA 1530 and 330 as i suspect they use the same interface as the ALA 100 series. Great antenna BTW.

Its been awhile, but im finally starting to get around to some DXing with it, especially on the NDB and BCB bands. Are you still looking for pictures of loop installations?? I can send you one of my modest loop if you like.

Also, Is the receiver one is to use with their ALA 100 transformer isolated or capacitive isolated from the DC in the interface unit??

Thanks again john

On Tuesday, June 10, 2014 5:14 PM, "Andrew Ikin andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

John,

The active portion is in the Head Amp., so it doesn’t matter which interface you use. The exception to this is with the ALA1530S+ and the ALA330S which have a 2 transformer Balanced Norton amplifier (2 x 2N4401) in the Interface to provide an extra 9dB gain with a +55dBm OIP3.

Btw, it was one of Chris Trask’s papers that suggested the 2N4401 for exceptional linear applications! However, the On semiconductor manufacture appears to be the best. Unfortunately the complement On Semi 2N4403 (T092) is now obsolete.

Kind regards

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 10, 2014 8:31 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Ala 100la antenna question

Hi Andy understood, but the actual active antenna portion or the "active antenna head" doesn't matter if it's getting the older -ve center voltage setup or the newer +ve center voltage setup. Is that correct?

Sent from
my iPhone

On Jun 10, 2014, at 2:25 PM, "Andrew Ikin andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com>
wrote:

>John,
>
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>>Andrew
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>>Andrew Ikin e-mail: sales@...
>>andy@...
>>URL: http://www.wellbrook.uk.com
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>>Wellbrook

Communications
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>>
>>Sent from my
iPhone

10622. Re: Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-16 20:24:15 UTC
From: jfarley44@...
Topic: 10571 Message: 10622

Hello all;

Name is Joe and this be my first post here.

The question of whether to use tuning diodes or a mechanical cap is extremely interesting, and I think that many of the concerns ment here are valid. I also think that there is another consideration, and that is "What is your expectation for the Q of your resonant loop in the design frequency range?" One has to consider which tuning means would have appropriate Q for the desired frequency band, and you might have to answer questions such as "Which approach will give me higher Q", if Q is what you are after.

My current workhorse resonant receiving loop tunes between 2500 and 7800 kHz, and is used primarily for tropical band and SW pirate DXing. This is a four turn loop built on a square PVC frame which gives a 20" side length. The winding is 10AWG type TEW untinned; a 3" center gap (the length of a standard PVC cross) is maintained between turns 2 an 3 to depress parasitic capacitance. This is tuned by a pair of BTB NTE618s or MVAM115s, and buffered by a balanced JFET (MPF102 and U310 pairs) cascode amp. Amplifier Vdd, tuning voltage, and RF are multiplexed on one 180 foot continuous run of F6 coax between the amplifier/tuner head on the mast and the power supply/signal splitter in the shack. The loop is mounted on a light duty rotator which is primarily used for depressing local QRN.

Using the BTB tuning diodes in this tuning scheme gives me a fair-weather loaded Q of between 200 and 250 over the mentioned frequency range. Using the highest quality mechanical variable caps I own (I have not tried vacuum caps yet), the best Q I have observed is less than half of the Q exhibited by the diodes in the lower SW frequencies.

BTW, I do agree that a diode tuned resonant loop may favor colder weather; on the two mornings here in Chicago where the temp bottomed at -17F, I was able to measure a loaded Q of approximately 330 on this loop. I have yet to bang through the numbers to find the most likely cause (or whether the measurements were bogus!). In the hotter weather, it's harder to tell (and possibly moot) given the generally higher summertime noise levels in these bands.

---In loopantennas@yahoogroups.com, <n3ikq@...> wrote :

Hi all, I'm experimenting with various remotely tuned open air loops and ferrite loopsticks. I have made a remotely tuned varicap diode assembly and a remotely tuned variable capacitor assembly (using a stepping motor w/arduino). I intend to experiment with each on my 4x4 open air box loop and soon a loopstick as well. I am also building up a differential preamp so I will not have to bother with a second pick up loop. My question is: What is the disadvantage of using varicaps (in pairs) compared with using a variable capacitor to tune a loop? Do varicaps have any tendency to overload or buckle under strong noise conditions? Put another way, Does the mechanical complexity of a remotely tuned variable capacitor provide any advantages over varicap diodes with all other things being equal? According to circuits I have obtained on the net, I can drive a differential preamp with either setup. A thorough search of the net has not provided me any data concerning my question. My only conclusion to date is that my stepping motor imparts significant noise

into the antenna when it is operating. This is not actually a bad thing in that it tends to serve as a tuning aid when using a traditional receiver. Of course when using an SDR with a spectrum scope, the noise is a distraction because one can see the antenna peak moving along the frequency domain as it is tuned. Any thoughts welcome!

10623. DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 00:42:56 UTC
From: compu_friend@...
Topic: 10623 Message: 10623

Hi Everyone,

I just completed a project where I needed to wind a ferrite antenna. Way too much to do good by hand. This winding machine was invented to do the job. The completed working model is on my pages at this link. It uses an Arduino UNO board, code, and common items you can obtain easy. This can run unattended for hours to do big core ferrite antennas that has a lot of wire to be wound. This one wound 24 miles of wire for me with little attention except to change wire spools..
San Antonio Weather http://lrsatx.com/

http://lrsatx.com/

San Antonio Weather http://lrsatx.com/ SAN ANTONIO, TEXAS WEATHER Davis Vantage Pro2 Plus 6163 Weather Station FORECAST RADAR Photo credit: NOAA Satellite credit: USA Ta...

View on lrsatx.com http://lrsatx.com/
Preview by Yahoo

Gerry, WB5TXA

10624. Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 14:24:33 UTC
From: doug.forbes@...
Topic: 10623 Message: 10624

Gerry,

Where is the link ?

Thanks,
Doug

10625. Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 16:33:46 UTC
From: wa4qal@...
Topic: 10623 Message: 10625

WOW! I am impressed! Thanks for sharing.

Any idea what the inductance is? Or, what the self-resonant frequency is?

Dave
WA4QAL

10626. Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 19:01:21 UTC
From: compu_friend@...
Topic: 10623 Message: 10626

Hi Dave,

These were special for one purpose only narrow band antennas. L=1114.6 H and 1148.8 H for the two of them.
It took about 260 NF capacitance to bring them on frequency at 7.8 Hz.. Each trimmed individually. The self resonance is very low I think in the 100-200 Hz area. These are in use at less than 1 Hz bandwidth for detection.

Gerry

10627. Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 19:06:35 UTC
From: compu_friend@...
Topic: 10623 Message: 10627

Not sure why you didnt see the link? Here it is again..

http://lrsatx.com/ http://lrsatx.com/

Link is at the bottom of the page area...

Gerry

10628. Re: [loopantennas] Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 19:36:36 UTC
From: Adrian Flynn
Topic: 10623 Message: 10628

Maybe because it is labeled "San Antonio Weather <http://lrsatx.com/>" and
I still do not see what it has to do with a "*Coil Winding Machine*"?

BTW: Google mail wants to label your posts as spam???
72/73
Adrian KF7DYU

On Fri, Jun 20, 2014 at 3:06 PM, compu_friend@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Not sure why you didnt see the link? Here it is again..
>
> http://lrsatx.com/
>
> Link is at the bottom of the page area...
>
> Gerry
>
>
>

10629. Re: [loopantennas] Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 19:59:05 UTC
From: david stremme
Topic: 10623 Message: 10629

gotta read real close - about half way thru they WX stuff is a small link that takes you too

http://lrsatx.com/schumann_Antenna_Winding_machine.htm

the meat of this thread

Happy hunting - Took me a few to find it too...

On Fri, 6/20/14, Adrian Flynn ADRIANJAMESFLYNN@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

Subject: Re: [loopantennas] Re: DIY Ferrite loop winding machine
To: loopantennas@yahoogroups.com
Date: Friday, June 20, 2014, 1:36 PM

Maybe because it is
labeled "San Antonio
Weather" and I still do not see what it has to do
with a "Coil Winding
Machine"?

BTW: Google
mail wants to label your posts as spam???

72/73Adrian
KF7DYU

On
Fri, Jun 20, 2014 at 3:06 PM, compu_friend@...
[loopantennas] <loopantennas@yahoogroups.com>
wrote:

Not sure why you didnt see the link? Here it is
again..
http://lrsatx.com/

Link is
at the bottom of the page area...

Gerry

10630. Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 20:07:40 UTC
From: habadgley
Topic: 10623 Message: 10630

Very creative setup.I am impressed!

Sent from Samsung tablet

10631. Re: Varicaps vs old fashioned variable capacitors

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-20 20:12:47 UTC
From: n3ikq@...
Topic: 10571 Message: 10631

Hi Joe, thanks for the post. I'm quickly amassing a small army of loops so I can learn for myself all of the good advice I've been getting. The first little tidbit of reality comes from comparing my recently homebuilt loopstick (Palomar clone) with my newly acquired Quantum loopstick from eBay. I needed a "standard" by which to compare my home built attempts. So far, my homebuilt model compares very favorably with the commercial version. I need to quiet things down electrically by getting some matched JFETs and paying attention to critical component values to keep the balanced amp really balanced. If I substitute a regen type preamp circuit I can improve the Q as well. My plans for the loopsticks are to build a remotely tuned outdoor model and possibly springing for a monster ferrite rod from Stormwise to replace the current Amidon 7.5" rod. I've become a big fan of remote tuning as I've been playing with stepping motors for the past year or two and I've built a few that use simple cat5 wire making hookup easy.

The big surprise is how much better even my 30" passive air loop performs against the loopsticks. Of course I was aware of this but there nothing like actually observing it myself! My next steps are to compare tuning the loop with varicaps vs the air variable cap and to try getting the best inductive match to my 50 ohm feed line. Additionally I want try connecting a balanced preamp directly to the resonate loop and observe the performance of that arrangement vs the passive coupling approach. Another few months and dollars later I'll finally be up to speed on what everyone else already knows! Well at least I'm having fun doing it!

10632. Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 00:58:21 UTC
From: compufriend3@...
Topic: 10623 Message: 10632

Hi Doug,

I have since put the link on the links page. Some are having problems finding it on my main page. I'm not sure what it might look like on a cell phone for instance. Maybe real tiny? Anyway you can grab it from the links page now.. Sorry for the hard to see link..

Gerry

10633. Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 11:26:58 UTC
From: Dominique Kremp
Topic: 10633 Message: 10633

Hi all,

On <http://www.ebay.de> www.ebay.de there is currently sort of loop antenna which puzzles me a bit:

http://tinyurl.com/laqx9sk

It's certainly home made. Never seen this shape before.

Any clue what it can be and how it works ?

See you

Dominique

Normandy, France

10634. RE: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 12:43:59 UTC
From: dx11
Topic: 10633 Message: 10634

Dominique,

Eigenbau is german and it means DIY or homemade.

The description is limited, but I think it is a tuned loop with three windings. Diameter is only 50 cms. Because a power cable (230V) is mentioned it will probably be an passive antenna with a remote motor drive for the tuning capacitor. In Germany there is a supplier of more or less identical antennas, I just can't remember the name. The small loop is a pick-up loop I guess.

Cor Beijersbergen PA4Q

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: zaterdag 21 juni 2014 13:27
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Any clue ?

Hi all,

On www.ebay.de there is currently sort of loop antenna which puzzles me a bit:

http://tinyurl.com/laqx9sk

It's certainly home made. Never seen this shape before.

Any clue what it can be and how it works ?

See you

Dominique

Normandy, France

10635. Re: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 13:02:24 UTC
From: Andy Gardner
Topic: 10633 Message: 10635

There's certainly been some machining gone into that puppy.

Balanced shield on the pick-up turn.

But did you see the size of the loops sitting on either side of it?

On 21/06/2014, at 11:26 PM, 'Dominique Kremp' dominique.kremp@... [loopantennas] wrote:

>
> Hi all,
>
>
>
> On www.ebay.de there is currently sort of loop antenna which puzzles me a bit:
>
> http://tinyurl.com/laqx9sk
>
> It's certainly home made. Never seen this shape before.
>
> Any clue what it can be and how it works ?
>
> See you
>
>
>
> Dominique
>
> Normandy, France
>
>
>
>
>

10636. RE: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 13:34:01 UTC
From: dx11
Topic: 10633 Message: 10636

The mechanics at the bottom of the loop housing could also be of a rotator.

The two large wooden loop structures are also very interesting.

Cor Beijersbergen PA4Q

-----Original Message-----
From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: zaterdag 21 juni 2014 15:02
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Any clue ?

There's certainly been some machining gone into that puppy.

Balanced shield on the pick-up turn.

But did you see the size of the loops sitting on either side of it?

On 21/06/2014, at 11:26 PM, 'Dominique Kremp' dominique.kremp@...
[loopantennas] wrote:

>

10637. RE: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 13:38:59 UTC
From: Dominique Kremp
Topic: 10633 Message: 10637

Hi Andy,
Thanks for the quick reply.
Yes, I noticed these huge loops too and I wonder which freq. they are for
...
See you

Dominique

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Envoyé : samedi 21 juin 2014 15:02
À : loopantennas@yahoogroups.com
Objet : Re: [loopantennas] Any clue ?

There's certainly been some machining gone into that puppy.

Balanced shield on the pick-up turn.

But did you see the size of the loops sitting on either side of it?

On 21/06/2014, at 11:26 PM, 'Dominique Kremp' dominique.kremp@...
[loopantennas] wrote:

>
> Hi all,
>
>
>
> On www.ebay.de there is currently sort of loop antenna which puzzles me a
bit:
>
> http://tinyurl.com/laqx9sk
>
> It's certainly home made. Never seen this shape before.
>
> Any clue what it can be and how it works ?
>
> See you
>
>
>
> Dominique
>
> Normandy, France
>
>
>

>
>

If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the
Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

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into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!

Yahoo Groups Links

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Analyse effectuée par AVG - www.avg.fr
Version: 2014.0.4592 / Base de données virale: 3972/7717 - Date: 21/06/2014

Aucun virus trouvé dans ce message.
Analyse effectuée par AVG - www.avg.fr
Version: 2014.0.4592 / Base de données virale: 3972/7717 - Date: 21/06/2014

10638. RE: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 13:45:49 UTC
From: dx11
Topic: 10633 Message: 10638

And the big loops are for sale also, they consist of more than one loop
built on one structure.

http://www.ebay.de/itm/221470468253

Cor Beijersbergen PA4Q

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: zaterdag 21 juni 2014 15:39
To: loopantennas@yahoogroups.com
Subject: RE: [loopantennas] Any clue ?

Hi Andy,
Thanks for the quick reply.
Yes, I noticed these huge loops too and I wonder which freq. they are for
...
See you

Dominique

-----Message d'origine-----
De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Envoyé : samedi 21 juin 2014 15:02
À : loopantennas@yahoogroups.com
Objet : Re: [loopantennas] Any clue ?

There's certainly been some machining gone into that puppy.

Balanced shield on the pick-up turn.

But did you see the size of the loops sitting on either side of it?

On 21/06/2014, at 11:26 PM, 'Dominique Kremp' dominique.kremp@...
[loopantennas] wrote:

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> Hi all,
>
>
>
> On www.ebay.de there is currently sort of loop antenna which puzzles me a
bit:
>
> http://tinyurl.com/laqx9sk
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> It's certainly home made. Never seen this shape before.
>
> Any clue what it can be and how it works ?

>
> See you
>
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>
> Dominique
>
> Normandy, France
>
>
>
>
>

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And please trim all this when replying!

Yahoo Groups Links

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Version: 2014.0.4592 / Base de données virale: 3972/7717 - Date: 21/06/2014

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Analyse effectuée par AVG - www.avg.fr
Version: 2014.0.4592 / Base de données virale: 3972/7717 - Date: 21/06/2014

10639. Re: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 14:17:07 UTC
From: Andy Gardner
Topic: 10633 Message: 10639

Ah. And they're an estate sale.

See the small loop low down on one structure that has an wire-frame earth cage built around the turns rather than using braid?

On 22/06/2014, at 1:45 AM, 'dx11' dx11@... [loopantennas] wrote:

>
>
>
> And the big loops are for sale also, they consist of more than one loop built on one structure.
>
> http://www.ebay.de/itm/221470468253
>
>
>
> Cor Beijersbergen PA4Q
>
>
>
>
>
>
>
> From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
> Sent: zaterdag 21 juni 2014 15:39
> To: loopantennas@yahoogroups.com
> Subject: RE: [loopantennas] Any clue ?
>
>
>
>
>
> Hi Andy,
> Thanks for the quick reply.
> Yes, I noticed these huge loops too and I wonder which freq. they are for
> ...
> See you
>
> Dominique
>
> -----Message d'origine-----
> De : loopantennas@yahoogroups.com [mailto:loopantennas@...m]
> Envoyé : samedi 21 juin 2014 15:02
> À : loopantennas@yahoogroups.com

> Objet : Re: [loopantennas] Any clue ?
>
> There's certainly been some machining gone into that puppy.
>
> Balanced shield on the pick-up turn.
>
> But did you see the size of the loops sitting on either side of it?
>
> On 21/06/2014, at 11:26 PM, 'Dominique Kremp' dominique.kremp@wanadoo.fr
> [loopantennas] wrote:
>
> >
> > Hi all,
> >
> >
> >
> > On www.ebay.de there is currently sort of loop antenna which puzzles me a
> bit:
> >
> > http://tinyurl.com/laqx9sk
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> > It's certainly home made. Never seen this shape before.
> >
> > Any clue what it can be and how it works ?
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> > See you
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> >
> >
> > Dominique
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> > Normandy, France
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> Version: 2014.0.4592 / Base de données virale: 3972/7717 - Date: 21/06/2014
>
>
>
>

10640. Re: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 14:40:26 UTC
From: Chris Trask
Topic: 10633 Message: 10640

>
>On <http://www.ebay.de> www.ebay.de there is currently sort of loop
>antenna which puzzles me a bit:
>
>http://tinyurl.com/laqx9sk
>
>It's certainly home made. Never seen this shape before.
>
>Any clue what it can be and how it works ?
>

It's a 3-turn loop with inductive coupling. Interesting design as I've never seen this form of coupling used with multi-turn loops.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10641. RE: [loopantennas] Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 16:59:09 UTC
From: hmholden69@...
Topic: 10633 Message: 10641

I would love to see the building plans for those loops. I hope that whom ever gets those loops will appreciate the time and engineering that went into building them.

10642. Re: Any clue ?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 17:38:00 UTC
From: la2pj@...
Topic: 10633 Message: 10642

Hi Dominique,

Looks like that is a copy of a Commercial loopantenna called MLA-T, sold my the german Company Wimo Antennen GNBH (http://www.wimo.de/magnetic-loop-antennas_e.html http://www.wimo.de/magnetic-loop-antennas_e.html)

73's
Egil - LA2PJ

10643. RE: [loopantennas] Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-21 13:58:34 UTC
From: Forbes, Doug
Topic: 10623 Message: 10643

Thanks Gerry, great stuff !

Doug Forbes
Professor (Ret.)
Computer Science / Electronics / Music Technology
College of the Canyons Valencia CA.
sites.google.com/site/dougforbes1/home<http://sites.google.com/site/dougforbes1/home>

_____
From: loopantennas@yahoogroups.com [loopantennas@yahoogroups.com]
Sent: Friday, June 20, 2014 5:58 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: DIY Ferrite loop winding machine

Hi Doug,

I have since put the link on the links page. Some are having problems finding it on my main page. I'm not sure what it might look like on a cell phone for instance. Maybe real tiny? Anyway you can grab it from the links page now.. Sorry for the hard to see link..

Gerry

10644. Re: [loopantennas] Re: DIY Ferrite loop winding machine

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-22 02:19:17 UTC
From: Adrian Flynn
Topic: 10623 Message: 10644

Thanks, I missed it completely.

What a way to put a link!

10645. Shielded Resonant HF Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-23 21:22:05 UTC
From: jfarley44@...
Topic: 10645 Message: 10645

A while back some insulators on a nearby power pole went crusty, and began to spew horrendous RFI around the neighborhood. I prefer to DX with an unshielded resonant loop, and even with azimuthal "nulling" my noise floor here was way too high - about an S7 - for my liking. After several calls to the Power Company over several weeks, I went into Repair Despair. The backup AL1530 worked OK, but I knew that I was missing DX.

I decided to see if I could get the best of both worlds, that is, a shielded resonant loop. I built a prototype of the loop using one of my standard loops on a PVC frame, some foamboard, aluminum foil, and tons of Scotch tape. Here's a pic:

http://i1049.photobucket.com/albums/s387/jFarley44/LunarLander_zps4593ae91.jpg
http://i1049.photobucket.com/albums/s387/jFarley44/LunarLander_zps4593ae91.jpg

The idea was to enclose the resonant loop inside a cobbled up shield (maintaining a 3 to 4 inch gap between the windings and the shield) to see if that would help to suppress noise pickup. The idea apparently has some merit, and here is a sample of audio capture which directly compares the audio capped with the unshielded standard RL to that capped with the shielded RL

http://www.mediafire.com/listen/4rdk48824h6tnqd/CFRX_6070AM19Oct12_2030z.mp3
http://www.mediafire.com/listen/4rdk48824h6tnqd/CFRX_6070AM19Oct12_2030z.mp3

The first 42 seconds of the audio is from the unshielded RL, and the balance is via the shielded RL.

Shortly after the prototype was evaluated, the Power Company fixed the pole and I put this project on the back burner. The shield gaps shown in the image are a first guess, and the lack of 100% coverage in the shield is just impatience showing through. I just toss this out there as an idea to other loop builders who may wish to explore this area.

I apologize for using direct links here; I am organizing my archives in the hope of creating more permanent refs in the Links section in the future.

10646. Re: Shielded Resonant HF Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-23 21:40:14 UTC
From: compufriend3@...
Topic: 10645 Message: 10646

HI,

I just scanned your text here and seen your doing something maybe that can really cut down on your reception.. If you have the loop totally covered all the way around it will conduct and make a big conducting loop around your antenna that will interfere with reception.. So go up to the top side, or really anywhere in the circle, and cut a small gap that is not touching anywhere around it . dividing the circle into a broken circle.. to make like a C shape around the loop. The E field will still be shielded and it cant conduct away your signals now.. The first time I ran in to this was with a lightning radar antenna where I did the same thing and wondered why it was so far down in sensitivity..Then some one clued me in on the shield being non contentious around it that way..It made a heck of a difference on my antenna.

Gerru. WB5TXA

10647. Re: Shielded Resonant HF Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-06-24 20:51:49 UTC
From: jfarley44@...
Topic: 10645 Message: 10647

Hi Gerry;

I agree with your concerns 100%. Maybe it's because of a cruddy image, but care was taken to ensure that shielding gaps were maintained in this kluge. In no place does the shielding foil make a complete turn around the loop windings; there is a 1/2" gap which hopefully is visible there. There is also a gap at the top of the loop so that the shield does not form a shunting turn in parallel with the windings.

I expected to take a major hit on the Q but I was pleasantly surprised to find that the Q was diminished by only about 20% (it dropped from around 250 to around 200 at 6900 kHz). While this does knock down the effective height proportionally, the loop still has plenty of output. Likewise, this Q reduction will degrade the minimum discernible signal somewhat; that point is probably moot since it was intended to be used during times of high ambient noise.

Also interesting is the fact that the tuning range of the shielded loop was translated upwards a bit as compared to the free space loop. I surmise that this is because the loop windings are now running in proximity to a ground plane, and their self-inductance has been knocked down a bit, but I am always open to other theories!

10648. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 11:16:50 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10648

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10649. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 11:16:50 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10649

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10650. Using AVA5-50 for an Active Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 12:03:39 UTC
From: w4jbb@...
Topic: 10650 Message: 10650

I posted this in the MagLoop group and realized I may have been asking the wrong group.

If memory serves, there is a scrap piece of AVA5-50 (roughly two coils ~4' in diameter) leaned against the wall of my office. It was just left over from a job and is too short for anything up a tower and too cumbersome for use inside a m/w station.

For some time, I have been toying with the idea of building an active loop antenna for roughly 10 - 80m. I'm not a big contester. When I have time, I compete with myself. Usually, I operate from 40 - 20m. However, I do not believe I am using the full potential of my K3 (I probably never will ;)) in an SO2R setting. I *do* have the second receiver. I'd like to be able to use it more and get what I paid for out of the transceiver.

Of all the plans available, from what do most folks have the best results?

AVA5-50 is the replacement for LDF5-50 so it is 7/8" hardline. This particular piece has the hollow conductor (newer AVA5-50 has a foam-filled conductor that we so unceremoniously found out in the field one day and had the wrong connectors). There may be enough coiled up to build two antennas.

I am open to suggestions.

73,
Joel - W4JBB

10651. Steward cores cross for Dallas Lankford antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 13:07:28 UTC
From: Chris Waldrup
Topic: 10651 Message: 10651

Hi,

I have plans to build some of Dallas Lankford's active loops. I see he uses Steward cores that seem to now be unobtanium.
They are:
35T0501-10H
35T1417-00H

Does anyone have cross reference information to a Micrometals/Amidon part number for these toroids?

Chris
KD4PBJ
—
Sent from Mailbox

10652. RE: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 13:52:44 UTC
From: dx11
Topic: 10651 Message: 10652

Hello Chris,

Which of Dallas Lankford’s loops are you referring to. The active loop articles I have just mention Amidon cores.

This is what I have:

Amplified 1 And 4 Meter Square Untuned Loop Antennas.pdf

An Amplified 1 Meter Square Untuned Loop Antenna.pdf

The Invention Of Active Flag And Loop Antennas.pdf

You have got something else? Or is there a website where I can find it?

Tnx,

Cor Beijersbergen PA4Q

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: dinsdag 1 juli 2014 15:07
To: Loop Antennas
Subject: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Hi,

I have plans to build some of Dallas Lankford's active loops. I see he uses Steward cores that seem to now be unobtanium.

They are:

35T0501-10H

35T1417-00H

Does anyone have cross reference information to a Micrometals/Amidon part number for these toroids?

Chris

KD4PBJ

—

10653. Re: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 13:52:39 UTC
From: Andrew Ikin
Topic: 10651 Message: 10653

Chris,

If you let me have a link to the Dallas Article I may be able to work out an alternative core type.

Btw, I have 10 of the 35T0501-10H

Kind regards

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, July 01, 2014 2:07 PM
To: Loop Antennas
Subject: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Hi,

I have plans to build some of Dallas Lankford's active loops. I see he uses Steward cores that seem to now be unobtanium.
They are:
35T0501-10H
35T1417-00H

Does anyone have cross reference information to a Micrometals/Amidon part number for these toroids?

Chris
KD4PBJ
—
Sent from Mailbox

10654. Re: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 14:17:27 UTC
From: Jack Smith
Topic: 10651 Message: 10654

35T0501 is back to being stocked by DigiKey, although I see they only have 2 pieces in stock as of this morning. It was dropped for a while and then restored with a minimum buy of 8,000 pieces but it's now available in quantity 1 and up. Also shows the 35T1417 parts as being in stock at DigiKey.

These are 'non stock' items but are shown as being available for purchase in quantity 1 and up.

35T mix has a relative permeability of 5000, so a similar FairRite or EPCOS core should be substitutable.

The 10H indicates the core is burnished and coated with epoxy; the 00 is, as I recall, just burnished, not coated.

Jack

On 7/1/2014 9:52 AM, Andrew Ikin andrew.ikin@...
[loopantennas] wrote:
>
> Chris,
> If you let me have a link to the Dallas Article I may be able to work
> out an alternative core type.
> Btw, I have 10 of the 35T0501-10H
> Kind regards
> Andrew
> *From:* mailto:loopantennas@yahoogroups.com
> *Sent:* Tuesday, July 01, 2014 2:07 PM
> *To:* Loop Antennas <mailto:loopantennas@yahoogroups.com>
> *Subject:* [loopantennas] Steward cores cross for Dallas Lankford
> antennas?
>
> Hi,
>
> I have plans to build some of Dallas Lankford's active loops. I see he
> uses Steward cores that seem to now be unobtanium.
> They are:
> 35T0501-10H
> 35T1417-00H
> Does anyone have cross reference information to a Micrometals/Amidon
> part number for these toroids?
> Chris
> KD4PBJ
> —
> Sent from Mailbox <https://www.dropbox.com/mailbox>
>

10655. Re: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 14:27:41 UTC
From: everettsharp@...
Topic: 10651 Message: 10655

Hi Cor,

If you have the 3 pdfs listed below, could you please send them to me, as I will add to my thumb drive article list.

Everett N8CNP

In a message dated 7/1/2014 8:52:50 A.M. Central Daylight Time, loopa ntennas@yahoogroups.com writes:

Hello Chris,
Which of Dallas Lankford’s loops are you referring to. The active loop articles I have just mention Amidon cores.
This is what I have:
Amplified 1 And 4 Meter Square Untuned Loop Antennas.pdf
An Amplified 1 Meter Square Untuned Loop Antenna.pdf
The Invention Of Active Flag And Loop Antennas.pdf
You have got something else? Or is there a website where I can find it?
Tnx,
Cor Beijersbergen PA4Q

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: dinsdag 1 juli 2014 15:07
To: Loop Antennas
Subject: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Hi,

I have plans to build some of Dallas Lankford's active loops. I see he uses Steward cores that seem to now be unobtanium.

They are:

35T0501-10H

35T1417-00H

Does anyone have cross reference information to a Micrometals/Amidon part number for these toroids?

Chris

KD4PBJ

—

10656. Re: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 18:33:16 UTC
From: Andrew Ikin
Topic: 10651 Message: 10656

Chris,

Further to my previous mail. The
EPCOS
B64290L0044X038 from Digikey may be worth considering. This core has an AL of 5.1uH Verses 4.5 uH of the 35T0501-10H

Deviating off your subject; some of these cores have high loss at HF, so some caution is required if they are being used in a wideband amplifier. For example amplifiers such as the Norton which require a 1 turn Feedback winding closely coupled to the multi-turn Collector winding to avoid core loss. These loses result in a higher than expected noise figure. Hence, the use of thick wire or the use of a 1 turn insulated copper tape with the other winding wound on top of the tape. The preferred core type would normally be a twin hole to ensure close coupling. The core type in the Norton Patent is a twin hole Siemens core!!
73
Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, July 01, 2014 2:07 PM
To: Loop Antennas
Subject: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Hi,

I have plans to build some of Dallas Lankford's active loops. I see he uses Steward cores that seem to now be unobtanium.
They are:
35T0501-10H
35T1417-00H

Does anyone have cross reference information to a Micrometals/Amidon part number for these toroids?

Chris
KD4PBJ
—
Sent from Mailbox

10657. Re: [loopantennas] Steward cores cross for Dallas Lankford antennas?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-01 20:20:53 UTC
From: Jack Smith
Topic: 10651 Message: 10657

Andrew:

The main advantage I see with a binocular core is extended upper and lower frequency range compared with the Norton amps I build with 35T toroid cores. Noise figure differences as measured at 10 MHz and above with an HP8970A NF meter and RFD2305 (think that's the right model number) noise source do not seem to vary more than the error inherent in NF measurements. Some cursory Y type NF measurements in the medium wave band support that conclusion.

My preference is for binocular cores for that reason and I probably will not do another board run for the toroid based Norton amps I sell when the current stock is exhausted.

NF is far more influenced by idle current and the transistors used in the design. Unfortunately there is no idle current that simultaneously maximizes performance of IP2, IP3 and NF.

Jack K8ZOA

On 7/1/2014 2:33 PM, Andrew Ikin andrew.ikin@...
[loopantennas] wrote:
>
> Chris,
> Further to my previous mail. The
> *EPCOS*
> B64290L0044X038 from Digikey may be worth considering. This core has
> an AL of 5.1uH Verses 4.5 uH of the 35T0501-10H
> Deviating off your subject; some of these cores have high loss at HF,
> so some caution is required if they are being used in a wideband
> amplifier. For example amplifiers such as the Norton which require a 1
> turn Feedback winding closely coupled to the multi-turn Collector
> winding to avoid core loss. These loses result in a higher than
> expected noise figure. Hence, the use of thick wire or the use of a 1
> turn insulated copper tape with the other winding wound on top of the
> tape. The preferred core type would normally be a twin hole to ensure
> close coupling. The core type in the Norton Patent is a twin hole
> Siemens core!!
> 73
> Andrew
> *From:* mailto:loopantennas@yahoogroups.com
> *Sent:* Tuesday, July 01, 2014 2:07 PM
> *To:* Loop Antennas <mailto:loopantennas@yahoogroups.com>
> *Subject:* [loopantennas] Steward cores cross for Dallas Lankford
> antennas?
>

> Hi,
>
> I have plans to build some of Dallas Lankford's active loops. I see he
> uses Steward cores that seem to now be unobtanium.
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> Does anyone have cross reference information to a Micrometals/Amidon
> part number for these toroids?
> Chris
> KD4PBJ
> —
> Sent from Mailbox <https://www.dropbox.com/mailbox>
>

10658. A bit OT: new delay line kit

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-02 03:44:59 UTC
From: pu3hag.l@gmail.com
Topic: 10658 Message: 10658

Hi,

Chavdar Levkov, LZ1AQ - who runs active-antenna.eu - has included a
2nd kit to his site: delay lines for phases antenna array.

I have one of his loop amplifiers still to build. I admit I have zero knowledge on delay lines and need to research a bit on this topic.

-- pu3hag huelbe

-- pu3hag huelbe

10659. Re: [loopantennas] A bit OT: new delay line kit

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-02 04:18:32 UTC
From: Richard (Rick) Karlquist
Topic: 10658 Message: 10659

On 7/1/2014 8:44 PM, 'pu3hag.l@...' pu3hag.l@...
[loopantennas] wrote:
> Hi,
>
> Chavdar Levkov, LZ1AQ - who runs active-antenna.eu
> <http://active-antenna.eu> - has included a
> 2nd kit to his site: delay lines for phases antenna array.
>
> I have one of his loop amplifiers still to build. I admit I have zero
> knowledge on delay lines and need to research a bit on this topic.
>
> -- pu3hag huelbe
>

Well, research this:

http://www.n6rk.com/Lumped_LC_Delay_Networks.gif

I published this in 2008 and I see that LZ1AQ's delay lines are virtually identical to the ones I described. Maybe he reinvented this stuff. I have an unpublished PC board design that uses jumpers exactly like the LZ1AQ board. However, I learned the hard way not to try to use a binary series of delays. Unless the delays are exact, there will be gaps in coverage and the delay you happen to need might be unrealizable. Instead, what I do is to use a so-called "Radix 1.5" series with ratios of: 1, 1.5, 2.25, 3.375, etc. instead of 1, 2, 4, 8 etc. This has a substantial overlap and allows for fairly sloppy tolerances. I got this idea from the ADC designers at Agilent who used Radix 1.5 to eliminate missing codes. They said everyone in the ADC community knows about this. Except, the variable delay line is analogous to a DAC instead of an ADC. Some principle though.

Rick

10660. Re: [loopantennas] A bit OT: new delay line kit

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-02 10:57:16 UTC
From: Andrew Ikin
Topic: 10658 Message: 10660

Hello Rick,

I don’t really see a problem with Chavdar’s use of a binary delayline sequence because any small phase error is not likely to affect the array performance. That said; I would prefer the use of a potentiometer with a ADC for controlling the phase rather than using a PC com port.

An alternative simplified design could use for example a 20ns delayline with 10 x 2ns tapes selected with 1 pole 10 way switch then buffered by a high z amp. so as not the load the delayline. Additional delay could relay selected prior to the tapped delay line.

I used this scheme over 30 years ago with loop array and active dipole arrays in an effort to combat Soviet Jamming. To be honest it was a total waste of time; because simple two element arrays lack the required directivity when dealing with a multitude arrival angles at HF.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Wednesday, July 02, 2014 5:18 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] A bit OT: new delay line kit

On 7/1/2014 8:44 PM, 'pu3hag.l@...' pu3hag.l@...
[loopantennas] wrote:
> Hi,
>
> Chavdar Levkov, LZ1AQ - who runs active-antenna.eu
> <http://active-antenna.eu> - has included a
> 2nd kit to his site: delay lines for phases antenna array.
>
> I have one of his loop amplifiers still to build. I admit I have zero
> knowledge on delay lines and need to research a bit on this topic.
>
> -- pu3hag huelbe
>

Well, research this:

http://www.n6rk.com/Lumped_LC_Delay_Networks.gif

I published this in 2008 and I see that LZ1AQ's delay
lines are virtually identical to the ones I described.
Maybe he reinvented this stuff. I have an unpublished
PC board design that uses jumpers exactly like the LZ1AQ

board. However, I learned the hard way not to try to use a binary series of delays. Unless the delays are exact, there will be gaps in coverage and the delay you happen to need might be unrealizable. Instead, what I do is to use a so-called "Radix 1.5" series with ratios of: 1, 1.5, 2.25, 3.375, etc. instead of 1, 2, 4, 8 etc. This has a substantial overlap and allows for fairly sloppy tolerances. I got this idea from the ADC designers at Agilent who used Radix 1.5 to eliminate missing codes. They said everyone in the ADC community knows about this. Except, the variable delay line is analogous to a DAC instead of an ADC. Some principle though.

Rick

10661. Re: [loopantennas] A bit OT: new delay line kit

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-02 15:24:43 UTC
From: Chris Trask
Topic: 10658 Message: 10661

```
>
>Chavdar Levkov, LZ1AQ - who runs active-antenna.eu - has included a
>2nd kit to his site: delay lines for phases antenna array.
>
```

I designed my own continuously variable phase shifter for my steerable interference canceller, which is in the group files section under the name "Antenna Canceller Prototype 02.pdf".

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10662. Re: [loopantennas] A bit OT: new delay line kit

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-02 21:18:19 UTC
From: lz1aq@...
Topic: 10658 Message: 10662

Hi Rick,
1. I know your publications and have included them into Links section of my article
http://www.lz1aq.signacor.com/docs/phased-array/2-ele_phased_array11.pdf
My mind is full with information of different kind (mostly garbage) and I realy do not know wheather some of my ideas are realy mine :-(Moreover the human brain usually refuse to accept unpleasant facts.

2. I have by my side a military automatic antenna tuner (with relays) which was built with radix 1.8. But I think that this delay line does not need that. The idea is to fix the delay to certain value that corresponds to the available distance in your yard.Moreover, the optimal delay is not critical - see my measurements in the above article. Let say you have available distance of 13 m between elements, then you fix the line to 40 ns delay (+ - 2.5 ns tolerance) and that is all. It works.
73 Chavdar
lz1aq@abv.bg LZ1AQ's page for SDR Radio and Active Loop Antenna
http://www.lz1aq.signacor.com

http://www.lz1aq.signacor.com

LZ1AQ's page for SDR Radio and Active Loop Antenna http://www.lz1aq.signacor.com LZ1AQ's SDR radio and Wideband Active Small Magnetic Loop Antenna projects.

View on www.lz1aq.signacor... http://www.lz1aq.signacor.com
Preview by Yahoo

10663. Re: [loopantennas] A bit OT: new delay line kit

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-02 21:40:12 UTC
From: lz1aq@...
Topic: 10658 Message: 10663

Hi Andy,
I agree that there are different ways to do the job. But what I want to emphasize is that I do not want to control the line from the shack – the idea is to fix it when you tune your array and then to forget about it. The serial line control just changes the directions and modes.
You are right that 2-element array is the simplest directional antenna. I can built 4-square or bigger array with active elements but the only problem is that my yard is only with 15 x 16 m size and I believe that there are too many hams with small yards. And I can say that there is quite a difference between 2-element and a single antenna.
73 Chavdar
Lz1aq@abv.bg mailto:Lz1aq@abv.bg www.lz1aq.signacor.com http://www.lz1aq.signacor.com/

10664. Cores for Dallas Lankford antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-03 17:15:14 UTC
From: Chris Waldrup
Topic: 10664 Message: 10664
Attachments: 1 described; binary payloads are missing from this source WARC

Hi Everyone,

Sorry to be slow in responding. The circuit is the dual ungrounded active flag on page 7. It calls for the Steward cores.
I checked and Steward seems to be based here in town (Chattanooga area) but they have been unresponsive to requests to purchase small quantities of their cores. The last time I checked, Digi Key didn't stock them.

http://www.dxing.info/equipment/new_active_mw_antennas.pdf

Chris
KD4PBJ
Tracy City, TN

10665. Re: [loopantennas] Cores for Dallas Lankford antennas [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-04 00:54:41 UTC
From: Jack Smith
Topic: 10665 Message: 10665

Chris:

How many 35T0501 cores do you need? I can send a few to you, but I don't have the larger cores on hand.

The version of Dallas's J310/J271 amplifier that I sell (Z10130A) does not use 35T0501 cores.
http://www.cliftonlaboratories.com/z10130a_fet_follower.htm for details.

The larger cores are used as common mode chokes in Dallas's design, and I would try DigiKey's PN 495-3857-ND as a substitute. It's an EPCOS part 34mm diameter, PN B64290L48X830 and should have similar performance to the Steward part.

If you absolutely have to have the Steward parts, and if you have a semi-plausible company name, call Steward's sales number and ask for samples.

Jack K8ZOA

On 7/3/2014 1:15 PM, Chris Waldrup kd4pbj@... [loopantennas] wrote:
> [Attachment(s) <#TopText> from Chris Waldrup included below]
>
> Hi Everyone,
>
> Sorry to be slow in responding. The circuit is the dual ungrounded
> active flag on page 7. It calls for the Steward cores.
> I checked and Steward seems to be based here in town (Chattanooga
> area) but they have been unresponsive to requests to purchase small
> quantities of their cores. The last time I checked, Digi Key didn't
> stock them.
>
> http://www.dxing.info/equipment/new_active_mw_antennas.pdf
>
> Chris
> KD4PBJ
> Tracy City, TN
>
>

10666. Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-09 12:51:41 UTC
From: chris.kucera@...
Topic: 10666 Message: 10666

Hi

I've been lurking around the forum for a while but haven't posted anything until now. I have a Pixel Pro 1a antenna that I think the amplifier has gone bad. I was wondering if anyone here has experience with this antenna that could maybe give me some information on how to test the amp. Pixel customer service won't help me out, they just want to sell me a new antenna. If my amp is truly bad, I will buy a Wellbrook like I should have done years ago. Thanks for the help.

Chris

10667. RE: [loopantennas] Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-09 20:17:08 UTC
From: Dominique KREMP
Topic: 10666 Message: 10667

Sorry Chris, I can't help you abt the Pixel Pro 1a and its issue, I find very detestable indeed from Pixel that they ignore their customers and their problems like that.

Wellbrook is far more customers friendly in that Andy, the firm manager, replies within 4 hours and really helps to find a solution.

have a nice day

Dominique

Normandy, France

De : loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Envoyé : mercredi 9 juillet 2014 14:52
À : loopantennas@yahoogroups.com
Objet : [loopantennas] Pixel loop antenna problem

Hi

I've been lurking around the forum for a while but haven't posted anything until now. I have a Pixel Pro 1a antenna that I think the amplifier has gone bad. I was wondering if anyone here has experience with this antenna that could maybe give me some information on how to test the amp. Pixel customer service won't help me out, they just want to sell me a new antenna. If my amp is truly bad, I will buy a Wellbrook like I should have done years ago. Thanks for the help.

Chris

Aucun virus trouvé dans ce message.
Analyse effectuée par AVG - www.avg.fr
Version: 2014.0.4716 / Base de données virale: 3986/7824 - Date: 09/07/2014

Aucun virus trouvé dans ce message.
Analyse effectuée par AVG - www.avg.fr
Version: 2014.0.4716 / Base de données virale: 3986/7824 - Date: 09/07/2014

10668. Re: [loopantennas] Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-09 21:18:27 UTC
From: Don
Topic: 10666 Message: 10668

Looks like they have been bought by something called Inlogis. There is a photo of the loop but no info is available. ????

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
DX-1000 FRG-100B FUNcube Dongle Pro+
ICF2010 Perseusx2 R70 R71A w/250Hz
R75x2 w/250Hz SDR-IQ SPR-4 SSR-1
SR-AF & LPF DSP599zx MFJ-784B
HD-1418 AF-1 MSB-1
PA0RDT Mini-Whipx2 @ 25ft
RYO Active Antenna @ 25ft
ALA100Lx2 Z1501F @20ft w/9ft Whip
Solarcon A-99

On 09-Jul-14 05:51, chris.kucera@... [loopantennas] wrote:
> Pixel Pro 1a

10669. Re: Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-09 22:51:47 UTC
From: JRTOW3RD@...
Topic: 10666 Message: 10669

Chris,

Well, the Wellbrook crowd is alive and well - if not much help. I'll try to offer some assistance. Let's debug it. A detailed inspection - and retightening - of all of the connectors & adapters - including in & out of the pre-amp - might find a 'simple' fix. First - is the power inserter green LED lit when the power switch is 'On'? If not, disconnect the cable to the pre-amp and repeat. If it still doesn't lite, unplug the wall warts coaxial plug from the inserter and measure the plug's output voltage - it should be ~20 VAC (Not DC - the rectifier, filter, and regulator are in the inserter.). If it reads zero, you've found your fault - the wall wart. If the wall wart is good, disconnect the transmission line from the pre-amp at the inserter. If the green LED now comes on with the 'On' switch, the fault is either in the pre-amp or the cable to it. While you are at it, measure the center pin to shell voltage of the inserter's input from the transmission line/pre-amp - it should be ~19.6VDC. Reconnect the transmission line at the inserter and disconnect it at the pre-amp. Measure the cable center wire to shield - it should be the same as back at the inserter - or else the feedline cable is bad. If everything is good thus far - and/or the green LED has worked all along, you need to check signal flow.

Unplug the wall wart AC supply. Tune the radio you use to a local MW station and verify that it works by touching it's antenna connection - note the signal level. Reconnect the cable from the radio to the power inserter - and disconnect the transmission line to the pre-amp at the inserter. Touch the now open female F connector (chassis mount on the inserter) and see if the MW station's signal returns. If there is no signal, the fault is in the receiver to inserter cable/adapter or inserter - determine which by replacing the receiver cable. If you are good to here, reconnect the cable and go to the preamp and disconnect the output lead that goes to the 'shack'. "Touching ' the cable's center wire should cause most of the signal to return - if not, your feedline is likely at fault. If it does, it could be your pre-amp - or loop antenna itself.

My Pro-1a was on my deck during a near miss by an F3-F4 tornado 1/12. The deck was cleared off of furniture, etc, and the loop was 'wound up' (I thought the clamp was tight!) and the eave mount's lag bolts were loosened, too. I tightened the connector's and it was fine (I never put sealant on the outside connections!). They are physically stout. I moved 7/13 to a garden home with an HOA and no outside antennas, so the loop is sitting in a tripod mount in the walkup attic and works better than ever now, and, thunderstorms or not, seems to be always left on. The inserter box runs warm, but that's it - pretty stout electrically, too. This site is quiet, too - underground utilities help!

If Pixel is out of business, that would be sad. I think the loop pre-amp was designed by Clifton Labs, if that helps. Good luck!

John

10670. Re: [loopantennas] Re: Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-10 16:16:15 UTC
From: david stremme
Topic: 10666 Message: 10670
Attachments: 1 described; binary payloads are missing from this source WARC

Pixel is alive and well....
We've undergone a name change to InLogisInc http://inlogisinc.com

I've not heard from the gentleman with the PIXEL LOOP issue
He doesn't reach out - we can't help him

We can offer troubleshooting support - and or sell him replacement components if necessary
(SHIPPING is Expensive however)

I am attaching the troubleshooting / setup tips tricks document I've been working on
it may be of some help to him

He can always reach me at
david@...
david@...
info@pixelsatradio.com

David Stremme
KA0IJV
303 526 1965 office

http://inlogisinc.com

On Wed, 7/9/14, JRTOW3RD@BELLSOUTH.NET [loopantennas] <loopantennas@yahoogroups.com>
wrote:

Subject: [loopantennas] Re: Pixel loop antenna problem
To: loopantennas@yahoogroups.com
Date: Wednesday, July 9, 2014, 4:51 PM

Chris,
Well,
the Wellbrook crowd is alive and well - if not much help.
I'll try to offer some assistance. Let's debug it. A
detailed inspection - and retightening - of all of the
connectors & adapters - including in & out of the
pre-amp - might find a 'simple' fix. First - is
the power inserter green LED lit when the power switch is
'On'? If not, disconnect the cable to the pre-amp
and repeat. If it still doesn't lite, unplug the wall
warts coaxial plug from the inserter and measure the
plug's output voltage - it should be ~20 VAC (Not DC -
the rectifier, filter, and regulator are in the inserter.).
If it reads zero, you've found your fault - the wall
wart. If the wall wart is good, disconnect the transmission

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If Pixel is out of business, that would be sad. I think the loop pre-amp was designed by Clifton Labs, if that helps. Good luck!

John

10671. Re: [loopantennas] Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-10 16:19:49 UTC
From: david stremme
Topic: 10666 Message: 10671

http://inlogisinc.com/products/amateurham-radio-antennas/ham-amateur-radio-antennas

the Free Shipping applies only to the Lower 48 states (Not Alaska or Hawaii)

On Wed, 7/9/14, Don stb55@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

Subject: Re: [loopantennas] Pixel loop antenna problem
To: loopantennas@yahoogroups.com
Date: Wednesday, July 9, 2014, 3:18 PM

Looks like they have been bought by something
called Inlogis. There is a

photo of the loop but no info is available. ????

Don KPC6NDB

Upland, CA

34.10 -117.63 1250ft

DX-1000 FRG-100B FUNcube Dongle Pro+

ICF2010 Perseusx2 R70 R71A w/250Hz

R75x2 w/250Hz SDR-IQ SPR-4 SSR-1

SR-AF & LPF DSP599zx MFJ-784B

HD-1418 AF-1 MSB-1

PA0RDT Mini-Whipx2 @ 25ft

RYO Active Antenna @ 25ft

ALA100Lx2 Z1501F @20ft w/9ft Whip

Solarcon A-99

On 09-Jul-14 05:51, chris.kucera@... [loopantennas]
wrote:

> Pixel Pro 1a

10672. RE: [loopantennas] Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-10 16:23:04 UTC
From: david stremme
Topic: 10666 Message: 10672

Replacement Amp is $200 + international Shipping
Replacement Power Inserter is $75 + international shipping
Brand New RF-PRO-1B Antenna is $499.99 + international shipping

david@...
david@...

David Stremme
KA0IJV
303 526 1965 office
720 457 3214 ext 103 direct
http://inlogisinc.com

On Wed, 7/9/14, 'Dominique KREMP' dominique.kremp@... [loopantennas]
<loopantennas@yahoogroups.com> wrote:

Subject: RE: [loopantennas] Pixel loop antenna problem
To: loopantennas@yahoogroups.com
Date: Wednesday, July 9, 2014, 2:17 PM

Sorry Chris, I
can't help you abt the Pixel Pro 1a and its issue, I
find very detestable indeed from Pixel that they ignore
their customers and their problems like that.Wellbrook is far
more customers friendly in that Andy, the firm manager,
replies within 4 hours and really helps to find a solution.
have a
nice day
 DominiqueNormandy,
France

 De : loopantennas@yahoogroups.com
[mailto:loopantennas@yahoogroups.com]
Envoyé : mercredi 9 juillet 2014
14:52
À :
loopantennas@yahoogroups.com
Objet :
[loopantennas] Pixel loop antenna
problem

Hi I've been lurking around the
forum for a while but haven't posted anything until now.
 I have a Pixel Pro 1a antenna that I think the amplifier
has gone bad. I was wondering if anyone here has
experience with this antenna that could maybe give me some

information on how to test the amp. Pixel customer service
won't help me out, they just want to sell me a new
antenna. If my amp is truly bad, I will buy a Wellbrook
like I should have done years ago. Thanks for the
help. Chris

Aucun virus trouvé dans ce
message.
Analyse effectuée par AVG - www.avg.fr
Version: 2014.0.4716 / Base de données virale:
3986/7824 - Date: 09/07/2014Aucun virus trouvé dans ce
message.
Analyse effectuée par AVG - www.avg.fr
Version: 2014.0.4716 / Base de données virale:
3986/7824 - Date: 09/07/2014

10673. Re: [loopantennas] Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-10 18:57:11 UTC
From: Everett Sharp
Topic: 10666 Message: 10673

Jack,

Looks like Pixel has sold-out, so you will have to see if the new owner is going to honor a royalty deal, if not then it looks like you are free to sell your amplifiers and maybe even start offering your own active loop antenna. Hire some young muscular kid to roll loops for you with a HF tubbing roller.

It is hard to believe that the previous owner of Pixel did mot tell you of the pending deal and workout the royalty deal with you and the new owner. That is the kind of people that it best not to deal with. The Pixel Active Loop would not be what it is today without your hard work and design of the the heart of it, the amplifier.

Everett

Sent from my iPad

> On Jul 10, 2014, at 11:19 AM, "david stremme dstremme@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> http://inlogisinc.com/products/amateurham-radio-antennas/ham-amateur-radio-antennas
>
> the Free Shipping applies only to the Lower 48 states (Not Alaska or Hawaii)
>
> ---
> On Wed, 7/9/14, Don stb55@verizon.net [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Subject: Re: [loopantennas] Pixel loop antenna problem
> To: loopantennas@yahoogroups.com
> Date: Wednesday, July 9, 2014, 3:18 PM
>
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> Looks like they have been bought by something
> called Inlogis. There is a
>
> photo of the loop but no info is available. ????

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>
>
> Don KPC6NDB
>
> Upland, CA
>
> 34.10 -117.63 1250ft
>
> DX-1000 FRG-100B FUNcube Dongle Pro+
>
> ICF2010 Perseusx2 R70 R71A w/250Hz
>
> R75x2 w/250Hz SDR-IQ SPR-4 SSR-1
>
> SR-AF & LPF DSP599zx MFJ-784B
>
> HD-1418 AF-1 MSB-1
>
> PA0RDT Mini-Whipx2 @ 25ft
>
> RYO Active Antenna @ 25ft
>
> ALA100Lx2 Z1501F @20ft w/9ft Whip
>
> Solarcon A-99
>
>
>
> On 09-Jul-14 05:51, chris.kucera@... [loopantennas]
> wrote:
>
> > Pixel Pro 1a
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10674. Wellbrook design change

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-10 19:09:54 UTC
From: Andrew Ikin
Topic: 10674 Message: 10674

Hello Group,

Here is a post I put on the Yahoo ALA1530 and Wellbrook Groups last month; less the pricing info. for the retro-fit loop amplifier.

For the past 17 years the ALA1530 and similar 1m diameter aluminium loops have been constructed with an integral amplifier. There are over 6000 units in service. The current failure rate is approximately 20 loops per year, which is reasonable for a total running time of 300 million hours.

A third of these failures are due to miss use. The rest are component related or brakes in the amplifier/connexion due wind load mechanical stress on the loop.

However, when a failure does occur the user has been faced with a purchase of the new loop plus a relatively high shipping cost for overseas customers.

Therefore, as of April 2014 the mechanical design has been improved to afford increased reliability and to facilitate ease of servicing:

The amplifier is now housed in a separate module, thus isolating the electronics from the mechanical stress caused by wind loading on the loop. The amplifier to loop wire terminations use tin plated silicone insulated wire and crimp terminals rated down to −40 Celsius. The module sits on top of the loop box and is secured by stainless steel screws.

The amplifier module can be easily replaced in the event of a failure without the customer having to purchase a new loop antenna plus the associated high shipping costs.

A new retrofit amplifier is now available for pre April 2014 loops and is now on the new Wellbrook website; listed under Components.

The amplifier is available for the following rigid loop antennas:

ALA1530

ALA1530LF

ALA1530S+

ALA1530+

ALA330S

LFL1010

The supplied module will be of the latest design. However, only an ALA1530 module will be supplied for the ALA1530+. This is because the new ALA1530 has a lower noise figure and improved loop/amp. frequency related impedance tracking.

The price is GBP70.00 or USD120.00 at the current exchange rate, plus postage.

This amplifier is easy to fit and replaces a previous design.

Kind regards

Andrew

Andrew Ikin e-mail: sales@...
andy@....com
URL: http://www.wellbrook.uk.com

Wellbrook Communications

10675. Re: [loopantennas] Re: Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-11 20:33:57 UTC
From: chris.kucera@...
Topic: 10666 Message: 10675

Hi David

I have been in contact with you for a couple months. I have received all your literature you have sent me but have not had any luck with my antenna. I thought I would ask on this forum to see if anyone else has had a problem and if they could help. I have received a couple of nice emails from members giving me some different things to try for which I am grateful for. I thank all the members that have responded and have offered advice.

Chris

10676. Preselector

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-12 18:27:36 UTC
From: hikeofyourlife@...
Topic: 10676 Message: 10676

So many little projects left undone. I did something of a workaround here and it made a big difference

I have a approx 100-foot random wire here in SoCal I use for AM BCB and shortwave. I wanted something to help me with HFDL because my house is underneath power lines and everything is quite noisy. I alligator-clipped the input from the antenna to my 30-inch loop antenna inside, back out from THAT loop (which makes my BCB radio work great with no tuning) to my shortwave receiver (DX-440) and audio from that to PC-HFDL to decode airplane transmissions. Another wire from ground on shortwave radio to ground rod outside.

I'm packing up to move so I won't build a preselector till next month but in lieu of that I also added alligator clips to my 1-meter loop made from fridge tubing and an air cap from an old AM-FM stereo. One clip from random wire to cap, from cap to 1M loop, then from loop to ground. Somewhat of a preselector, I guess, but I've at least doubled my HFDL decodes thanks to much lower S/N ratio. Still missing some transmissions, maybe an amp is next in line. Learning as I go here.

Vince in SoCal soon to be much farther north

10677. RE: [loopantennas] Preselector

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-12 18:58:08 UTC
From: Brian Burns
Topic: 10676 Message: 10677
Attachments: 2 described; binary payloads are missing from this source WARC

Hello Vince,

How much farther north? I’m in Fort Bragg.

Cheers,

Brian Burns Ex: W5BRO, K6UCD

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Saturday, July 12, 2014 11:28 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Preselector

So many little projects left undone. I did something of a workaround here and it made a big difference

I have a approx 100-foot random wire here in SoCal I use for AM BCB and shortwave. I wanted something to help me with HFDL because my house is underneath power lines and everything is quite noisy. I alligator-clipped the input from the antenna to my 30-inch loop antenna inside, back out from THAT loop (which makes my BCB radio work great with no tuning) to my shortwave receiver (DX-440) and audio from that to PC-HFDL to decode airplane transmissions. Another wire from ground on shortwave radio to ground rod outside.

I'm packing up to move so I won't build a preselector till next month but in lieu of that I also added alligator clips to my 1-meter loop made from fridge tubing and an air cap from an old AM-FM stereo. One clip from random wire to cap, from cap to 1M loop, then from loop to ground. Somewhat of a preselector, I guess, but I've at least doubled my HFDL decodes thanks to much lower S/N ratio. Still missing some transmissions, maybe an amp is next in line. Learning as I go here.

Vince in SoCal soon to be much farther north

This email is free from viruses and malware because avast! Antivirus protection is active.
http://www.avast.com

10678. RE: [loopantennas] Preselector

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-12 20:17:19 UTC
From: hikeofyourlife@...
Topic: 10676 Message: 10678

Will be kind of even...Reno

10679. Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-13 01:06:30 UTC
From: kb8nty@...
Topic: 10679 Message: 10679

Well with these recent posts of Pixel and the Wellbrook pushed me to inquiring of the group.
I have my opinion, but wanted to request of those who may have real time personal experience.

With the intention to use for amateur radio HF receiving, especially 80 - 40 & 30 meters may I please ask of those who may have used either of these, any opinions, experiences good or bad?

I see Wellbrook has made what looks like a great update to an already respectable product.

I planned to go with a fixed type shielded loop with a remote adjustable control, but that purchase has been put on a delay...so had me looking & thinking of these two commercial type "broadband" loops, but for the cost of them, I had to try and see what do those who actually made the purchase think.

A city lot here with only 20-30 +/- feet available from transmit antennas, however my TS-590 Kenwood offers a separate receive antenna port and Kenwood says the circuit is turned off when in transmit...Also have the KD9SV DXpedition unit to allow a second layer of front-end protection.

So overload should not be an issue for the most-part. Also the loops preamp/amp is not a big requirement as my TS-590 and the KD9SV both have preamps, although the KD9SV is 160/80 only, but ideally would be great to have option to switch the loops amp out to do some A-B-C preamp/amp testing!

Back to where I started...Your thoughts on either loop? please... Pixel - Wellbrook good? bad? even better yet the long shot that some lucky fellow had opportunity to have used both?

Thank You for any help opinion or experience.

-73- Ross KB8NTY
http://www.rossradio.net http://www.rossradio.net RF ground radial site

10680. Re: [loopantennas] Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-13 02:22:14 UTC
From: Richard (Rick) Karlquist
Topic: 10679 Message: 10680

I A/B'ed the Pixel loop against a tuned shielded loop
on 160 meters. The Pixel simply runs out of gain on
1.8 MHz and is not as sensitive as the tuned loop.
You are limited by amplifier noise.
Copy was always better on the tuned loop (many contest
QSO's).

I also A/B'ed a Pixel loop (ground mounted) against
a Yagi on a tower. Of course the Yagi trounced it;
probably an unfair comparison.

Rick N6RK

On 7/12/2014 6:06 PM, kb8nty@... [loopantennas] wrote:
> Well with these recent posts of Pixel and the Wellbrook pushed me to
> inquiring of the group.
>
> I have my opinion, but wanted to request of those who may have real time
> personal experience.
>
>
> With the intention to use for amateur radio HF receiving, especially 80
> - 40 & 30 meters may I please ask of those who may have used either of
> these, any opinions, experiences good or bad?
>
>
> I see Wellbrook has made what looks like a great update to an already
> respectable product.
>
>
> I planned to go with a fixed type shielded loop with a remote adjustable
> control, but that purchase has been put on a delay...so had me looking &
> thinking of these two commercial type "broadband" loops, but for the
> cost of them, I had to try and see what do those who actually made the
> purchase think.
>
>
> A city lot here with only 20-30 +/- feet available from transmit
> antennas, however my TS-590 Kenwood offers a separate receive antenna
> port and Kenwood says the circuit is turned off when in transmit...Also
> have the KD9SV DXpedition unit to allow a second layer of front-end
> protection.
>
>
> So overload should not be an issue for the most-part. Also the loops
> preamp/amp is not a big requirement as my TS-590 and the KD9SV both have

> preamps, although the KD9SV is 160/80 only, but ideally would be great
> to have option to switch the loops amp out to do some A-B-C preamp/amp
> testing!
>
>
> Back to where I started...Your thoughts on either loop? please... Pixel
> - Wellbrook good? bad? even better yet the long shot that some lucky
> fellow had opportunity to have used both?
>
>
> Thank You for any help opinion or experience.
>
>
> -73- Ross KB8NTY
>
> http://www.rossradio.net RF ground radial site
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10681. Re: [loopantennas] Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-13 03:55:37 UTC
From: Steve Ratzlaff
Topic: 10679 Message: 10681

Was the first comparison comparing two identical-diameter loops?
Steve

On 7/12/2014 7:22 PM, 'Richard (Rick) Karlquist' richard@...
[loopantennas] wrote:
>
> I A/B'ed the Pixel loop against a tuned shielded loop
> on 160 meters. The Pixel simply runs out of gain on
> 1.8 MHz and is not as sensitive as the tuned loop.
> You are limited by amplifier noise.
> Copy was always better on the tuned loop (many contest
> QSO's).
>
> Rick N6RK
>

10682. Re: [loopantennas] Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-13 01:47:22 UTC
From: Tim Harding
Topic: 10679 Message: 10682

I have used both the Pixel and the Wellbrook. I purchased the Pixel to replace my PAR End Feed SW antenna. The PAR antenna was good, and the Pixel performed about the same. I receiving more noise on the Pixel that I thought was acceptable and testing things, moving things, etc. did not improve the signal. I was disappointed with the antenna. I sold the Pixel and purchased a Wellbrook. The Wellbrook is fantastic. I do not have the noise issue I had with the Pixel. I am using the same coax, the antenna is mounted on the same pole, the installation is identical. And the Wellbrook works beyond my expectations. My main receiver is a WinRadio G313. I keep the squelch settings at -110 dBm (about S3). I pick up signals from the noise that I could never had heard before. So, I went from the Pixel to the Wellbrook and have never regretted it.

Tim
KD9AKX

On 7/12/2014 9:06 PM, kb8nty@... [loopantennas] wrote:
>
> Well with these recent posts of Pixel and the Wellbrook pushed me to
> inquiring of the group.
>
> I have my opinion, but wanted to request of those who may have real
> time personal experience.
>
>
> With the intention to use for amateur radio HF receiving, especially
> 80 - 40 & 30 meters may I please ask of those who may have used either
> of these, any opinions, experiences good or bad?
>
>
> I see Wellbrook has made what looks like a great update to an already
> respectable product.
>
>
> I planned to go with a fixed type shielded loop with a remote
> adjustable control, but that purchase has been put on a delay...so had
> me looking & thinking of these two commercial type "broadband" loops,
> but for the cost of them, I had to try and see what do those who
> actually made the purchase think.
>
>
> A city lot here with only 20-30 +/- feet available from transmit
> antennas, however my TS-590 Kenwood offers a separate receive antenna
> port and Kenwood says the circuit is turned off when in

> transmit...Also have the KD9SV DXpedition unit to allow a second layer
> of front-end protection.
>
>
> So overload should not be an issue for the most-part. Also the loops
> preamp/amp is not a big requirement as my TS-590 and the KD9SV both
> have preamps, although the KD9SV is 160/80 only, but ideally would be
> great to have option to switch the loops amp out to do some A-B-C
> preamp/amp testing!
>
>
> Back to where I started...Your thoughts on either loop? please...
> Pixel - Wellbrook good? bad? even better yet the long shot that some
> lucky fellow had opportunity to have used both?
>
>
> Thank You for any help opinion or experience.
>
>
> -73- Ross KB8NTY
>
> http://www.rossradio.net RF ground radial site
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10683. RE: [loopantennas] Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-10 16:06:34 UTC
From: tom.dostal@...
Topic: 10666 Message: 10683

I do not own and have no experience with the Pixel antenna.

I do own a Wellbrook AL330S. I had trouble with it a few years ago when it was about 1 year old. Andy promptly sent a replacement loop after I contacted him and provided the results from my diagnostic procedures.

My Wellbrook support experience was very positive and I will provide kudos where they are due.

Tom

10684. Re: [loopantennas] Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-13 05:06:56 UTC
From: Richard Karlquist
Topic: 10679 Message: 10684

No the shielded loop had a perimeter of 40 feet.

Rick Karlquist
N6RK

On 2014-07-12 20:55, Steve Ratzlaff ratzlaffsteve@...
[loopantennas] wrote:
> Was the first comparison comparing two identical-diameter loops?
> Steve
>
> On 7/12/2014 7:22 PM, 'Richard (Rick) Karlquist' richard@...
> [loopantennas] wrote:
>
>>
>>
>> I A/B'ed the Pixel loop against a tuned shielded loop
>> on 160 meters. The Pixel simply runs out of gain on
>> 1.8 MHz and is not as sensitive as the tuned loop.
>> You are limited by amplifier noise.
>> Copy was always better on the tuned loop (many contest
>> QSO's).
>>
>> Rick N6RK
>
>
>
> Links:
> ------
> [1]
> https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/10681;_ylc=X3oDMTJyOGo0dTAwBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDY4MQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0MDUyMjM3ODk-?act=reply&messageNum=10681
> [2]
> https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmbmg2aDBjBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0MDUyMjM3ODk-
> [3]
> https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/10679;_ylc=X3oDMTM3ZG5jMzJxBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDY4MQRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0MDUyMjM3ODkEdHBjSWQDMTA2Nzk-
> [4] http://groups.yahoo.com/group/loopantennas/links
> [5] http://groups.yahoo.com/group/loopantennas/files
> [6] http://ph.groups.yahoo.com/group/loopantennas/photos
> [7]

> https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmZHNiYjRqBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0MDUyMjM3ODk-
> [8]
> https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnbmU1aDVqBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDA1MjIzNzg5
> [9]
> https://groups.yahoo.com/neo;_ylc=X3oDMTJlYnNjMjNhBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQwNTIyMzc4OQ--
> [10] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
> [11] https://info.yahoo.com/legal/us/yahoo/utos/terms/

10685. Re: [loopantennas] Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-13 13:32:56 UTC
From: kkyahoo
Topic: 10666 Message: 10685

I can agree with this, support from Wellbrook is top notch and you won't get ripped of if you need spares. The new design of replacement head amp looks very easy to fit.

If you want to start with the classic ALA1530 you can always upgrade to an Imperium later as the extra amplification resides in the power inserter box.

I have 3 Wellbrooks, two ALA1530 types and one Imperium, they are all very good. My oldest one was bought in the late 90's and I upgraded it last year to include the latest amplifier design.

Kevin
----- Original Message -----
From: tom.dostal@... [loopantennas]
To: loopantennas@yahoogroups.com
Sent: Thursday, July 10, 2014 5:06 PM
Subject: RE: [loopantennas] Pixel loop antenna problem

I do not own and have no experience with the Pixel antenna.

I do own a Wellbrook AL330S. I had trouble with it a few years ago when it was about 1 year old. Andy promptly sent a replacement loop after I contacted him and provided the results from my diagnostic procedures.

My Wellbrook support experience was very positive and I will provide kudos where they are due.

Tom

10686. Re: Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-13 14:00:22 UTC
From: JRTOW3RD@...
Topic: 10679 Message: 10686

At my previous QTH, I had all sorts of wire antennas. My thirty odd year mainstay was a long wire of 145ft, but it's siblings over the years included dipoles, TTFD, AD Sloper, etc - always with my QRM source out in front of my house - the three HV phases feeding my subdivision 'bent' at an apex in front of my house, causing stress cracks in their insulators - and in three decades, Alabama Power wouldn't replace them, although they spent a fortune over the years with truck crews as frequent visitors, mainly tightening connections. My aperiodic QRM made DXing very spotty. My LW was lost due to it's house end support, a 70ft pine, loosing much of it's top half. Similar fates befell my other wire antennas - I quit listening for a while. One day, I elected to spend some money - a grand - and ordered a Palstar R30A and a Pixel Pro-1a. The latter proved to be much more useful.

In comparison - and from logs, where the background noise level on my R390A would run 40-45db on it's carrier meter while the NRD-525 ran S6-S8 and the R8 ran S7 - all daytime 'clear' around 6 MHz. I mounted the Pro-1a 12ft behind my house at ~8ft above the ground on my deck's apron via a five foot mast in an eave mount. I adjusted it for minimal noise - no more R390A, but the NRD-525 & R8 were within a half S unit of the logged signals of several stable stations - WWV (2.5, 5, 10, & 15 MHz), CFRX 6.07, ABC 9.58MHz, etc - and that's plus or minus half an S unit. A MW local was 'in the mud' - nulled! I was happy until 1/12 when a tornado twisted my loop around it's mount - and knocked out the power in the subdivision as it lay waste to my neighbors. APC set new poles and wires - but must have found some more 'vintage' insulators - I then needed to null in two directions. Skip ahead to 7/13 - I moved to a garden home with a tall walk-up attic. I bought a tripod mast base and loaded my loop, still on it's 5ft mast, into my Jeep and unloaded it at the new house, immediately carrying it and the tripod up into the end-of-July near 100F outside temp attic. Ten minutes later, having set it in the tripod in the center, some ten feet from the HVAC, and finding an unused RG6 feed to my office to repurpose as the loop's feed, I went down to my office and hooked up that end. Wow - underground utilities are great - nothing to null, save some 6.2 & 9.3 MHz digital hash DFed to my fiber optic modem in the yard. S2-S3 daytime, I can live with. Other digital noise from my 25" LCD PC monitor evaporated when I replaced the crimped connector, BNC to UHF, with one I soldered together - with Belden cable. In fairness, QS RG6 with adapters worked as well. In any case, signals are nearly as strong - within a half S-unit - of what they were. Noise is all but not existent (Radio Australia, this late - 1345 UTC, is 10db/S9, with 10 MHz WWV S9 - on my R30A 6kHz BW. Background noise at 9.700 MHz is S1-S2 at most.), thanks to the buried power lines no doubt.

Is the Pixel Pro-1a the answer to everyone's needs? No way - and no wonder your loop has a stronger signal, Rick - it has ten times the pickup area! Did you make sure the loops were parallel to each other and several wavelengths apart? Oddly, the amplified magnetic field loop seems to work best 6-10 ft off of ground - and away from metal (towers, guys, etc). Sure, the amplifier introduces some noise - but, in my experience, not much at all. With my home's 'Home Owner's Association' and it's no outside antenna edict, save a satellite TV dish, it is my 'answer'. I am sure the Wellbrook would do as well... but I was in a 'national pride' mood - both the Pixel and the Palstar are made in the USA.

John

10687. Re: Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-15 05:04:10 UTC
From: kb8nty@...
Topic: 10679 Message: 10687

Thanks everyone sincerely, for all the pixel vs wellbrook, & tuned loop input and contribution.
A big help and excellent information!

73 Ross KB8NTY

ground radial website: http://www.rossradio.net http://www.rossradio.net

ground radial conversation, please visit & join:
https://groups.yahoo.com/neo/groups/groundradial/conversations/messages
https://groups.yahoo.com/neo/groups/groundradial/conversations/messages

10688. Re: [loopantennas] Re: Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-16 10:31:13 UTC
From: Andrew Ikin
Topic: 10679 Message: 10688

The two loops in question use differing topologies i.e. Mobius verses a balanced loop.
It would be interesting to know what was the basis of using the Mobius loop; other than it sounds impressive being the work of Dr. Carl Baum while working for the USAF, given that it has yet to prove its self to offer any improvement over conventional screened or balance wideband loops.
Maybe someone from Pixel could shed some light on this.
73
Andrew Ikin

10689. ARRL 100TH ANNIVERSARY

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-17 13:31:25 UTC
From: david stremme
Topic: 10679 Message: 10689

If you're in the area attending the ARRL 100th stop by and see the PIXEL RF-1B-PRO Demo - take advantage of the show pricing

10690. Re: [loopantennas] ARRL 100TH ANNIVERSARY

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-17 22:01:53 UTC
From: Andrew Ikin
Topic: 10679 Message: 10690

David wrote on July 17th

snip < If you're in the area attending the ARRL 100th stop by and see the PIXEL RF-1B-PRO Demo - take advantage of the show pricing>

David, will you be there to answer customers questions and technical queries?

73

Andrew
.

10691. Re: [loopantennas] ARRL 100TH ANNIVERSARY

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-18 14:19:42 UTC
From: david stremme
Topic: 10679 Message: 10691

I WON'T be
However DOUG TALLEY (President- & CO Designer of the Loop) will be on site doing Live
Product Demos and answering questions..

David

On Thu, 7/17/14, Andrew Ikin andrew.ikin@... [loopantennas] <loopantennas@yahoogroups.com>
wrote:

Subject: Re: [loopantennas] ARRL 100TH ANNIVERSARY
To: loopantennas@yahoogroups.com
Date: Thursday, July 17, 2014, 4:01 PM

David wrote on July
17th

snip
< If you're in the
area attending the ARRL 100th stop by and see the PIXEL
RF-1B-PRO Demo - take
advantage of the show pricing>

David, will you be there
to answer customers questions and technical
queries?

73

Andrew

.

10692. Four Tuned Air Loop Antennas For Sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-19 20:24:01 UTC
From: everettsharp@...
Topic: 10692 Message: 10692

I have four, very unique and one of a kind, tuned air core loop antennas for sale, each of the loops are hexagonal shaped and are works of art. They are made from quarter sawn Red Oak and wound with 330/46 Litz wire. They are each mounted on Lazy Susan's. They have high Q Russian variable capacitors with a 3:1 reduction drive and have coupling loops that are connected to a matching transformer to give a 50 ohm output. Two of the loops are 1 meter in size, one is for MW covering 470 to 1745 KHz, the other 1 meter loop in for LW covering from 150 to 630 KHz.

One of the loops is a dual band design, covering 480 to 1960 KHz and the second band covers 1870 to 4480 KHz. The smallest loop is the equivalent of a 2' box loop, but is hexagonal shaped and covers the MW band.

I will not ship any of these loop antennas, as they could be easily damaged in shipment. I live in Tuscaloosa, AL, so any buyer would have to pick them up at my home. If anyone has interest in any of these antennas and needs more information and pictures please email me off list, everettsharp (at) A O L.

Everett N8CNP

10693. Re: [loopantennas] Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-20 23:44:30 UTC
From: Andy Gardner
Topic: 10679 Message: 10693

I dare say not many people have 160m Yagi's to play with. :^)

Andy
ZL3AG

On 13/07/2014, at 2:22 PM, 'Richard (Rick) Karlquist' richard@...m [loopantennas] wrote:

> I A/B'ed the Pixel loop against a tuned shielded loop
> on 160 meters. The Pixel simply runs out of gain on
> 1.8 MHz and is not as sensitive as the tuned loop.
> You are limited by amplifier noise.
> Copy was always better on the tuned loop (many contest
> QSO's).
>
> I also A/B'ed a Pixel loop (ground mounted) against
> a Yagi on a tower. Of course the Yagi trounced it;
> probably an unfair comparison.
>
> Rick N6RK

10694. Re: [loopantennas] Pixel vs Wellbrook

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-21 00:57:06 UTC
From: Richard (Rick) Karlquist
Topic: 10679 Message: 10694

On 7/20/2014 4:44 PM, Andy Gardner ceo@... [loopantennas] wrote:
>
> I dare say not many people have 160m Yagi's to play with. :^)
>
> Andy
> ZL3AG
>

The comparison to a Yagi was on 40 through 10 meters.

Rick N6RK

10695. Re: [loopantennas] Four Tuned Air Loop Antennas For Sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-21 04:46:36 UTC
From: Craig F. Simmons
Topic: 10692 Message: 10695

Hello sir, I am K9TEN and am working in Kuwait as a contractor for over the past 3 years. I live in Harvest, Alabama and will be home for good in November 2014. I am very interested in maybe buying one of your loops and when I get home would be glad to drive to pick one up. Maybe you have some pictures and additional information on them. I am looking mostly for any type of loop for the three bands that I have the most trouble with 40, 75, and 160 meters. I have been hit 2ea times by tornado's and have no tall trees/towers left for antennas for these bands. Thank you and have a great day. 73's Craig K9TEN

On Sat, Jul 19, 2014 at 11:24 PM, everettsharp@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> I have four, very unique and one of a kind, tuned air core loop antennas
> for sale, each of the loops are hexagonal shaped and are works of art. They
> are made from quarter sawn Red Oak and wound with 330/46 Litz wire. They
> are each mounted on Lazy Susan's. They have high Q Russian variable
> capacitors with a 3:1 reduction drive and have coupling loops that are
> connected to a matching transformer to give a 50 ohm output. Two of the
> loops are 1 meter in size, one is for MW covering 470 to 1745 KHz, the
> other 1 meter loop in for LW covering from 150 to 630 KHz.
>
> One of the loops is a dual band design, covering 480 to 1960 KHz and the
> second band covers 1870 to 4480 KHz. The smallest loop is the equivalent of
> a 2' box loop, but is hexagonal shaped and covers the MW band.
>
> I will not ship any of these loop antennas, as they could be easily
> damaged in shipment. I live in Tuscaloosa, AL, so any buyer would have to
> pick them up at my home. If anyone has interest in any of these antennas
> and needs more information and pictures please email me off list,
> everettsharp (at) A O L.
>
> Everett N8CNP
>
>
>
>

10696. Re: Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-21 13:32:28 UTC
From: chris.kucera@...
Topic: 10666 Message: 10696

Thanks again for the help. I decided to buy a Wellbrook. All I can say is wow! I hooked it up temporarily in my garage, leaning up against a wall and it completely blows away the pixel. My pixel never worked this good when it was new. I can't wait to get it up on my mast to really hear it work.

Chris

10697. Re: Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-21 18:08:26 UTC
From: kb8nty@...
Topic: 10666 Message: 10697

Hi Chris,

User results speak volumes, yet if you read Pixels website, their loop is the best!...of course what else would you expect to read on the manufactures website.
The real world experiences from actual users helps others in making decisions prior to any purchasing.

When you get the time, may I request if you will to please post:
1). Which Wellbrook model you purchased?
2). What bands-frequency's you mainly use the loop for?
3). How it's mounted...How high?...Is it on a rotator?
4). If you have a transmitting antenna, how close do you install your loops in relation to the transmit antenna?...How much power you transmit with? if you do transmit, and if so do you disconnect or short your transmit antenna when receiving to prevent any potential interaction?

Sorry for all the questions...your replies will help me in my research in preparation to making a loop purchase, and I'm sure others who may be looking for the same information.

Happy to hear your satisfaction Chris...Enjoy your loop there, it's a good one!

-73- Ross KB8NTY
http://www.rossradio.net http://www.rossradio.net "all about ground radials"

10698. Re: Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-22 01:22:01 UTC
From: chris.kucera@...
Topic: 10666 Message: 10698

Hi Ross

I should have bought this loop first a long time ago. I bought the ALA-1530 because I wanted an all purpose loop for HF and MW. I listen to shortwave, usually from about 3 MHz up to about 15 Mhz and I also like to listen to late night talk radio on AM. I get a kick out of how many stations I can pick up from around the country where I live at night. I had my Pixel up on a mast about 20 feet up on a rotator. I am going to put the Wellbrook up in the same place soon. I can't go any higher because of the power lines behind my property. I'll try and put up a picture when everything is all mounted again.

I don't have a license so I cannot answer your questions regarding a transmitting antenna. I live out in the middle of nowhere in Colorado where there really isn't anyone that I can learn from so I just stick to the shortwave for now.

Chris

10699. Re: Pixel loop antenna problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-22 02:23:09 UTC
From: kb8nty@...
Topic: 10666 Message: 10699

Hey Chris,

Thank you for your reply...appreciated.
If you wish to move ahead and try to get into amateur radio, google ARRL. This is an organization all about amateur radio, and if & when you have any further questions or wish to move ahead feel free to contact me, I will offer you what help I can..I'm 57 here and forced to be disabled after working all my life then due to multiple back surgeries and related issues, & then get a supprize leukemia diagnosis.uggh...

Love all things radio, and first started listening to AM, and tried to get all 50 states. I also really enjoy nighttime AM talk radio.
I had driven my van from Cleveland,Ohio down to Corpus Christi, Texas and back eight times on our family vacations. After all day driving my wife & daughter would fall asleep and I would listen & tune the AM stations as I drove across the country, when I hear the late night AM talk radio now, it takes me back to those days!..We ended up moving to Corpus, but moved back to Cleveland as my wife became homesick.

After AM listening, I went to shortwave listening, CB, then took part in 11 meter sideband in the very early 70's, keeping on the illegal theme, I then wired up an military ARC-5 transmitter and ran a bootleg AM radio station, transmitting pretty far even into Canada. Then went straight and got my novice license in ham radio in 1973.

I think you would enjoying transmitting as much as you do listening, there is something in amateur radio that should match your interest!

Back to the loop...sorry for getting off course there...Looks like I'm going to purchase the 1530 as you did. I have done lots of research and you picked a winner, happy to hear of your success. I will also use a rotor, the loop is not so much directional as it having a quite sharp null.
The rotor will allow you to null out interference as well as other stations, at times you can tune in a AM station, then on the same frequency turn your rotor around and the station you were listening to will fade out and the loop will pick up another station...right on the same frequency!...Very cool!

Thanks again for your information on your wellbrook loop, with the new design you should enjoy years of enjoyment. Keep the group updated, and your pic's would be enjoyed by many.

Have good evening friend...

Ross KB8NTY

http://www.rossradio.net http://www.rossradio.net ground radial website
https://groups.yahoo.com/neo/groups/groundradial/info
https://groups.yahoo.com/neo/groups/groundradial/info ground radial conversation-join in!

10700. Re: Wellbrook design change

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-07-22 02:41:36 UTC
From: kb8nty@...
Topic: 10674 Message: 10700

Great Information!...Thank you for sharing Andrew....

Regards;
Ross KB8NTY

http://www.rossradio.net http://www.rossradio.net

10701. (no subject)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-01 01:31:44 UTC
From: Loyd Sherry
Topic: 10701 Message: 10701

Getting Started:
I heard some one on the air who indicated they were using a Fractional Loop antenna.
I had never heard of them before as I am interested in antennas so I would like to know where I should find more information.
I would like to get information on construction and design for 80 and 40 meter band. Also are they commercially for sale and where I might find this information.
Thanks
Loyd

10702. Re: [loopantennas] (unknown)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-01 06:46:00 UTC
From: John
Topic: 10701 Message: 10702

Might that have been FRACTAL Antenna? Lots
of pictures on Google.

John
KK6IL

On 7/31/2014 6:31 PM, Loyd Sherry loydsherry610@... [loopantennas]
wrote:
>
>
> Getting Started:
> I heard some one on the air who indicated they were using a Fractional
> Loop antenna.
> I had never heard of them before as I am interested in antennas so I
> would like to know where I should find more information.
> I would like to get information on construction and design for 80 and 40
> meter band. Also are they commercially for sale and where I might find
> this information.
> Thanks
> Loyd
>
>
>

10703. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-01 11:30:14 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10703

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10704. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-01 11:30:14 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10704

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10705. Re: [loopantennas] (unknown)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-01 20:43:38 UTC
From: Andy
Topic: 10701 Message: 10705

Loyd wrote:

"I heard some one on the air who indicated they were using a Fractional Loop antenna."

If I heard that, I would seek clarification.

Until that, I would guess that it might mean either:
- A Fractal antenna of some kind, or
- A loop antenna that is a fraction of a wavelength long, also known as a Small Magnetic Loop antenna.

I've never heard of a Fractal Loop, but I suppose they could exist. Fractal antennas are somewhat controversial, as to whether or not they actually do anything special, other than just look pretty and perhaps make big bucks for the people who make and sell them. Fractal antennas are apparently used in cellphones, and that may be their niche application. I have not heard much about them in significant use elsewhere. There's a guy named Nathan Cohen who has been a big proponent of fractal antennas, though these days his company (Fractal Antenna Systems Inc.) seems to be more interested in researching meta-materials and 'cloaking' devices, than antennas. Mr. Cohen has been the target of much ridicule in years gone by.

Small magnetic loops can be either homebuilt or purchased. They are the magnetic equivalent of a very short dipole. They tend to have very large currents and voltages and very narrow bandwidths and require a lot of attention to keep the losses down. Most small loops are used on the higher HF bands, not 80, but yes they can be used there too. Losses tend to go up (and bandwidths down) as you go towards the lower frequency HF bands, unless you scale the antenna dimensions up accordingly. Most homebuilt small transmitting loops require a vacuum capacitor, which is a kind of variable capacitor normally found in high power transmitters. They can better withstand the large currents and voltages (many 10s of KVs) and keep the I*R losses down.

The AlexLoop is one of the less expensive commercial small loops.

Regards,
Andy

10706. Re: [loopantennas] (unknown)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-01 21:04:47 UTC
From: Myamiphil
Topic: 10701 Message: 10706
Attachments: 1 described; binary payloads are missing from this source WARC

I made a fractal antenna for HDTV. Works great.. I picked all the stations in the NY area.

Essentially a dipole antenna folded down. (UHF) see attachment. I guess if it was resized..... but for lower freqs it would be much larger, using the same design.

Best Regards
Phil
WA2069SWL

Lat: 40.8367633 Long: -74.1768412

From: "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Friday, August 1, 2014 4:43 PM
Subject: Re: [loopantennas] (unknown)

Loyd wrote:

"I heard some one on the air who indicated they were using a Fractional Loop antenna."

If I heard that, I would seek clarification.

Until that, I would guess that it might mean either:
- A Fractal antenna of some kind, or
- A loop antenna that is a fraction of a wavelength long, also known as a Small Magnetic Loop antenna.

I've never heard of a Fractal Loop, but I suppose they could exist. Fractal antennas are somewhat controversial, as to whether or not they actually do anything special, other than just look pretty and perhaps make big bucks for the people who make and sell them. Fractal antennas are apparently used in cellphones, and that may be their niche application. I have not heard much about them in significant use elsewhere. There's a guy named Nathan Cohen who has been a big proponent of fractal antennas, though these days his company (Fractal Antenna Systems Inc.) seems to be more interested in researching meta-materials and 'cloaking' devices, than antennas. Mr. Cohen has been the target of much ridicule in years gone by.

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KVs) and keep the I*R losses down.

The AlexLoop is one of the less expensive commercial small loops.

Regards,
Andy

10707. Fractional TURN loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-01 21:33:16 UTC
From: Richard (Rick) Karlquist
Topic: 10701 Message: 10707

I believe that I commented in this group recently that the
Mobius loop developed by the military and copied by Pixel can be
considered to be a fractional TURN loop (IE 1/2 turn). (Not a
"fractional loop" as you said.) I coined that
terminology as it applies to Mobius loops.

What I mean by this is that an N turn loop has N times
the open circuit voltage compared to a 1 turn loop.
A Mobius loop has 1/2 as much open circuit voltage
compared to a 1 turn loop, so it could be considered
a 1/2 turn loop.

As of course they are commercially for sale by the
company the took over from Pixel (I forgot the name).

Rick Karlquist N6RK

On 7/31/2014 6:31 PM, Loyd Sherry loydsherry610@... [loopantennas]
wrote:
> Getting Started:
> I heard some one on the air who indicated they were using a Fractional
> Loop antenna.
> I had never heard of them before as I am interested in antennas so I
> would like to know where I should find more information.
> I would like to get information on construction and design for 80 and 40
> meter band. Also are they commercially for sale and where I might find
> this information.
> Thanks
> Loyd
>
>

10708. Re: [loopantennas] (unknown) [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-02 04:37:51 UTC
From: Craig F. Simmons
Topic: 10701 Message: 10708

Understand the use of "HDTV" as any part referring that there is something special needed to receive "HDTV" signals is false and inaccurate. The receiving antenna does not care what type of information is being sent, only the frequency. A regular antenna made for analog signals at the same frequency would work just as well. The Fractal loop is just a full wave loop (Adjusted length according to interaction of folding) allowing it to be more compact and smaller. Using fractal design allows for a "quad" type antenna to have similar gain in a small size. Also it works somewhat different on F/B and forward gain patterns. Magnetic (Fractional loop) is a different thing all together. There are hundreds of articles and books available for reading.

On Sat, Aug 2, 2014 at 12:04 AM, Myamiphil myamiphil@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
> [Attachment(s) <#1479363ce88af7fb_TopText> from Myamiphil included below]
>
> I made a fractal antenna for HDTV. Works great.. I picked all the stations
> in the NY area.
> Essentially a dipole antenna folded down. (UHF) see attachment. I guess if
> it was resized..... but for lower freqs it would be much larger, using the
> same design.
>
> Best Regards
> Phil
> WA2069SWL
> Lat: 40.8367633 Long: -74.1768412
>
>
>
> ----------
> *From:* "Andy ai.egrps@... [loopantennas]" <
> loopantennas@yahoogroups.com>
> *To:* loopantennas@yahoogroups.com
> *Sent:* Friday, August 1, 2014 4:43 PM
> *Subject:* Re: [loopantennas] (unknown)
>
>
> Loyd wrote:
>
> "I heard some one on the air who indicated they were using a
> Fractional Loop antenna."
>
> If I heard that, I would seek clarification.

>
> Until that, I would guess that it might mean either:
> - A Fractal antenna of some kind, or
> - A loop antenna that is a fraction of a wavelength long, also known as a
> Small Magnetic Loop antenna.
>
> I've never heard of a Fractal Loop, but I suppose they could exist.
> Fractal antennas are somewhat controversial, as to whether or not they
> actually do anything special, other than just look pretty and perhaps make
> big bucks for the people who make and sell them. Fractal antennas are
> apparently used in cellphones, and that may be their niche application. I
> have not heard much about them in significant use elsewhere. There's a guy
> named Nathan Cohen who has been a big proponent of fractal antennas, though
> these days his company (Fractal Antenna Systems Inc.) seems to be more
> interested in researching meta-materials and 'cloaking' devices, than
> antennas. Mr. Cohen has been the target of much ridicule in years gone by.
>
> Small magnetic loops can be either homebuilt or purchased. They are the
> magnetic equivalent of a very short dipole. They tend to have very large
> currents and voltages and very narrow bandwidths and require a lot of
> attention to keep the losses down. Most small loops are used on the higher
> HF bands, not 80, but yes they can be used there too. Losses tend to go up
> (and bandwidths down) as you go towards the lower frequency HF bands,
> unless you scale the antenna dimensions up accordingly. Most homebuilt
> small transmitting loops require a vacuum capacitor, which is a kind of
> variable capacitor normally found in high power transmitters. They can
> better withstand the large currents and voltages (many 10s of KVs) and keep
> the I*R losses down.
>
> The AlexLoop is one of the less expensive commercial small loops.
>
> Regards,
> Andy
>
>
>
>
>
>

10709. Re: [loopantennas] (unknown) [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-02 17:16:49 UTC
From: Brian Burns
Topic: 10701 Message: 10709
Attachments: 4 described; binary payloads are missing from this source WARC

Hello Phil,

Unfortunately your email got caught in my spam filter, and the attachment got stripped off. Could you post it again?

Thanks a bunch,

Brian Burns

I made a fractal antenna for HDTV. Works great.. I picked all the stations in the NY area.

Essentially a dipole antenna folded down. (UHF) see attachment. I guess if it was resized..... but for lower freqs it would be much larger, using the same design.

Best Regards

Phil
WA2069SWL

Lat: 40.8367633 Long: -74.1768412

From: "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Friday, August 1, 2014 4:43 PM
Subject: Re: [loopantennas] (unknown)

Loyd wrote:

"I heard some one on the air who indicated they were using a Fractional Loop antenna."

If I heard that, I would seek clarification.

Until that, I would guess that it might mean either:

- A Fractal antenna of some kind, or

- A loop antenna that is a fraction of a wavelength long, also known as a Small Magnetic Loop antenna.

I've never heard of a Fractal Loop, but I suppose they could exist. Fractal antennas are somewhat controversial, as to whether or not they actually do anything special, other than just look pretty and perhaps make big bucks for the people who make and sell them. Fractal antennas are apparently used in cellphones, and that may be their niche application. I have not heard much about them in significant use elsewhere. There's a guy named Nathan Cohen who has been a big proponent of fractal antennas, though these days his company (Fractal Antenna Systems Inc.) seems to be more interested in researching meta-materials and

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The AlexLoop is one of the less expensive commercial small loops.

Regards,

Andy

This email is free from viruses and malware because avast! Antivirus protection is active.
http://www.avast.com

10710. Re: [loopantennas] (unknown)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-02 20:53:18 UTC
From: Andy
Topic: 10701 Message: 10710

"the attachment got stripped off. Could you post it again?"

Here was the link to the attachment:

https://groups.yahoo.com/neo/groups/loopantennas/attachments/267137820

If that doesn't work, go to the group's main webpage, then click on More, then Attachments. The one (currently) at the top of the list is "Re: [loopantennas] (unknown) <https://groups.yahoo.com/neo/groups/loopantennas/attachments/267137820>". Click on that. Now you should see an icon for the PDF file, ready to be opened or downloaded.

Andy

10711. Re: [loopantennas] (unknown)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-02 20:58:38 UTC
From: Andy
Topic: 10701 Message: 10711

All this stuff about "HDTV" is sure to cause dumbed-down confusion. Not only is it meaningless with respect to an antenna, but in some circles, "HDTV" has come to be synonymous with the remaining UHF TV channels ... which is unfortunate because some TV stations are still on VHF channels. Not many, but a few. I'm not referring to the "channel number" either (which is now meaningless, thanks to HDTV), but to the actual frequencies used.

But I digress from the subject of loop antennas.

Andy

10712. Re: [loopantennas] (unknown)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-02 23:52:39 UTC
From: Myamiphil
Topic: 10701 Message: 10712
Attachments: 1 described; binary payloads are missing from this source WARC

Trying again

Best Regards
Phil
WA2069SWL

Lat: 40.8367633 Long: -74.1768412

From: "'Brian Burns' brian@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Saturday, August 2, 2014 1:16 PM
Subject: Re: [loopantennas] (unknown)

Hello Phil,

Unfortunately your email got caught in my spam filter, and the attachment got stripped off. Could you post it again?

Thanks a bunch,

Brian Burns

I made a fractal antenna for HDTV. Works great.. I picked all the stations in the NY area. Essentially a dipole antenna folded down. (UHF) see attachment. I guess if it was resized..... but for lower freqs it would be much larger, using the same design.

Best Regards
Phil
WA2069SWL
Lat: 40.8367633 Long: -74.1768412

From:"Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Friday, August 1, 2014 4:43 PM
Subject: Re: [loopantennas] (unknown)

Loyd wrote:

> "I heard some one on the air who indicated they were using a Fractional Loop antenna."

If I heard that, I would seek clarification.

Until that, I would guess that it might mean either:
- A Fractal antenna of some kind, or
- A loop antenna that is a fraction of a wavelength long, also known as a Small Magnetic

Loop antenna.

I've never heard of a Fractal Loop, but I suppose they could exist. Fractal antennas are somewhat controversial, as to whether or not they actually do anything special, other than just look pretty and perhaps make big bucks for the people who make and sell them. Fractal antennas are apparently used in cellphones, and that may be their niche application. I have not heard much about them in significant use elsewhere. There's a guy named Nathan Cohen who has been a big proponent of fractal antennas, though these days his company (Fractal Antenna Systems Inc.) seems to be more interested in researching meta-materials and 'cloaking' devices, than antennas. Mr. Cohen has been the target of much ridicule in years gone by.
  snip

10713. Re: [loopantennas] (unknown)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-03 00:00:21 UTC
From: Myamiphil
Topic: 10701 Message: 10713

I know theres nothing special about it.. But it was fun to build. And for an indoor antenna it works great. I also used it on my USB Dongle radio... It did ok.. I forget what range of freqs I tried.

Best Regards
Phil
WA2069SWL

Lat: 40.8367633 Long: -74.1768412

_____
From: "'Craig F. Simmons' k910dog@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Saturday, August 2, 2014 12:37 AM
Subject: Re: [loopantennas] (unknown)

Understand the use of "HDTV" as any part referring that there is something special needed to receive "HDTV" signals is false and inaccurate. The receiving antenna does not care what type of information is being sent, only the frequency. A regular antenna made for analog signals at the same frequency would work just as well. The Fractal loop is just a full wave loop (Adjusted length according to interaction of folding) allowing it to be more compact and smaller. Using fractal design allows for a "quad" type antenna to have similar gain in a small size. Also it works somewhat different on F/B and forward gain patterns. Magnetic (Fractional loop) is a different thing all together. There are hundreds of articles and books available for reading.

On Sat, Aug 2, 2014 at 12:04 AM, Myamiphil myamiphil@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>[Attachment(s) from Myamiphil included below]
>I made a fractal antenna for HDTV. Works great.. I picked all the stations in the NY area.
>Essentially a dipole antenna folded down. (UHF) see attachment. I guess if it was resized..... but for lower freqs it would be much larger, using the same design.
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>
>Best Regards
>Phil
>WA2069SWL
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>_____
> From: "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com>
>To: loopantennas@yahoogroups.com
>Sent: Friday, August 1, 2014 4:43 PM
>Subject: Re: [loopantennas] (unknown)
>
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>
>Loyd wrote:
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>
> "I heard some one on the air who indicated they were using a Fractional Loop antenna."
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>- A loop antenna that is a fraction of a wavelength long, also known as a Small Magnetic Loop antenna.
>
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>I've never heard of a Fractal Loop, but I suppose they could exist. Fractal antennas are somewhat controversial, as to whether or not they actually do anything special, other than just look pretty and perhaps make big bucks for the people who make and sell them. Fractal antennas are apparently used in cellphones, and that may be their niche application. I have not heard much about them in significant use elsewhere. There's a guy named Nathan Cohen who has been a big proponent of fractal antennas, though these days his company (Fractal Antenna Systems Inc.) seems to be more interested in researching meta-materials and 'cloaking' devices, than antennas. Mr. Cohen has been the target of much ridicule in years gone by.
>
>
>Small magnetic loops can be either homebuilt or purchased. They are the magnetic equivalent of a very short dipole. They tend to have very large currents and voltages and very narrow bandwidths and require a lot of attention to keep the losses down. Most small loops are used on the higher HF bands, not 80, but yes they can be used there too. Losses tend to go up (and bandwidths down) as you go towards the lower frequency HF bands, unless you scale the antenna dimensions up accordingly. Most homebuilt small transmitting loops require a vacuum capacitor, which is a kind of variable capacitor normally found in high power transmitters. They can better withstand the large currents and voltages (many 10s of KVs) and keep the I*R losses down.
>
>
>The AlexLoop is one of the less expensive commercial small loops.
>
>
>Regards,

>Andy
>
>
>
>
>
>

10714. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-23 09:40:08 UTC
From: longjohn412@...
Topic: 10701 Message: 10714

I think you mean Fractional Wave Loop Antenna which differs from a Small Magnetic Loop Antenna in that a SMLA is 1/10 wavelength or less and a FWLA is usually closer to 1/4 or even 1/2 wavelengthGoogle search brings up a lot of information using the proper term

Ignore those who told you you were using the wrong term here, they were (mostly) wrong and were just ignorant of a different type of loop antenna

This looks to me like a good place to start
Helical loop antenna construction methods http://www.antennastealth.com/

Helical loop antenna construction methods http://www.antennastealth.com/ How to construct a helcal wound loop, 2 element helical loop

View on www.antennastealth.com http://www.antennastealth.com/
Preview by Yahoo

10715. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-24 00:49:27 UTC
From: Richard (Rick) Karlquist
Topic: 10701 Message: 10715

On 8/23/2014 2:40 AM, longjohn412@... [loopantennas] wrote:

> Helical loop antenna construction methods <http://www.antennastealth.com/>
> How to construct a helcal wound loop, 2 element helical loop
>
> View on www.antennastealth.com <http://www.antennastealth.com/>

The concept of helically loading a loop is complete nonsense.
The last thing you want is additional inductance and RF resistance.
One of the "advantages" touted here is reduction of cost and weight
by replacing solid copper pipe with plastic pipe wrapped with
copper foil. That much is fine, but if that is what you want
to do, you should simply run the foil in a straight line along
the length of the plastic pipe so it is an electrical equivalent
of copper pipe. To whatever extent these antennas "work", they
would work better without helical loading.

Also remember that no matter how you construct it, a small loop
will have a combination of poor efficiency, extremely narrow
bandwidth and/or limited power handling. Helical loading does
nothing to change this fundamental fact, and actually makes
it worse.

Rick N6RK

10716. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-24 05:59:26 UTC
From: Andy
Topic: 10701 Message: 10716

"The concept of helically loading a loop is complete nonsense.
The last thing you want is additional inductance and RF resistance."

The same can be said about a loading coil at the base of a shortened vertical.

And yet people do it all the time. One might say it makes HF mobile possible.

It is just an aide in achieving a better impedance match with a non-resonant antenna.

The flip-side is that one can fool oneself into thinking that a trick actually improves an easily measured property, such as bandwidth. Indeed the bandwidth does go up if you do something that adds loss. (FYI, I do not believe that wider bandwidth is something claimed for Rich's helically loaded small loops.)

As an aside, I've been trying to understand the figure-8 configuration that some small loop builders seem to be using, and whether there is anything special to it or if it's just wasted work.

On the plus side, Rich Fusinski and others seem to have one heck of a lot of fun making and using those loaded loops. Why spoil their fun? :-)

Andy

10717. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-25 04:58:21 UTC
From: qrp.gaijin@...
Topic: 10701 Message: 10717

On 8/23/2014 2:40 AM, longjohn412@... mailto:longjohn412@... [loopantennas] wrote:
>> View on www.antennastealth.com <http://www.antennastealth.com/
http://www.antennastealth.com/>

In loopantennas@yahoogroups.com, <richard@...> wrote :
> The concept of helically loading a loop is complete nonsense.
> The last thing you want is additional inductance and RF resistance.
> Rick N6RK

I agree completely. It is perhaps instructive to observe the fundamental error that leads the designer to his erroneous claim that a helically-wound loop is more efficient (!) than a solid-conductor loop of equivalent loop diameter. From the above-referenced page we see the reasoning behind the helical loop:
http://antennastealth.com/calculate-a-helical-loop.html
http://antennastealth.com/calculate-a-helical-loop.html . Note the following misleading statement: "If we divide 32.97 feet of copper by 3.14 we get 10.5 feet which electrically makes the 6 foot loop inductance value equal to 10.5 feet."

If you follow along the computations shown on that web page, you can see that the author is:

(a) Computing the total length of copper strap wound into a helix around the circular loop support. (Obviously, the length of the strap will be longer than the circumference of the circle formed by the physical loop support around which the strap is wrapped, because the strap is forced to wind its way around the small diameter of the support tube on its way around the large circular support.)

(b) Computing the diameter of a hypothetical circle that could have been formed if the entire length of the helically-wound copper strap would have been unwound and formed into a large circular loop with no helical winding or other meandering of the conductor. (Obviously, this hypothetical circle will be of larger diameter than the physical diameter of the circular loop support.)

and finally, the fatal error,

(c) Plugging in this hypothetical "diameter of a loop that could have been formed, but was not formed, by the helically wound strap" directly into AA5TB's loop calculator in the field for the physical loop diameter, which then yields unphysically high values for radiation resistance and efficiency that are based on the hypothetically larger loop diameter, that does not reflect the physical loop diameter.

In other words, for a given physical loop diameter in physical 3D space, the helically wound loop is using a longer total conductor length that has been packed into the same physical 3D space. The idea that this increases the efficiency of a small loop is -- again -- nonsense, at least to anyone who understands how small loops radiate (phase difference between opposite sides of the physical loop leading to incomplete field cancellation). Of course, attempting to point this out to the helical loop enthusiasts is an exercise in

futility.

In loopantennas@yahoogroups.com, <ai.egrps@...> wrote :
> On the plus side, Rich Fusinski and others seem to have one heck of a
> lot of fun making and using those loaded loops. Why spoil their fun? :-)

> Andy

I've resigned myself to taking the same stance. I have nothing against antenna experimenters having fun, but still, it is annoying to see extraordinary, unsupported claims boldly and confidently being made, that contradict hundreds of years of evidence-backed electromagnetic theory and practice. Such is the Internet.

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com

10718. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-25 05:29:42 UTC
From: Andy Gardner
Topic: 10701 Message: 10718

In addition he's using PVC as a former to wind the copper foil around - that's a q-killer right there.

Andy
ZL3AG

On 25/08/2014, at 4:58 PM, qrp.gaijin@... [loopantennas] wrote:

>
> On 8/23/2014 2:40 AM, longjohn412@... [loopantennas] wrote:
> >> View on www.antennastealth.com <http://www.antennastealth.com/>
>
> In loopantennas@yahoogroups.com, <richard@...> wrote :
> > The concept of helically loading a loop is complete nonsense.
> > The last thing you want is additional inductance and RF resistance.
> >&n! bsp;Rick N6RK
>
> I agree completely. It is perhaps instructive to observe the fundamental error that leads the designer to his erroneous claim that a helically-wound loop is more efficient (!) than a solid-conductor loop of equivalent loop diameter. From the above-referenced page we see the reasoning behind the helical loop: http://antennastealth.com/calculate-a-helical-loop.html . Note the following misleading statement: "If we divide 32.97 feet of copper by 3.14 we get 10.5 feet which electrically makes the 6 foot loop inductance value equal to 10.5 feet."

10719. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 06:11:35 UTC
From: Andy
Topic: 10701 Message: 10719

FYI, I came across a recent article by Owen Duffy (VK1OD, creator of the now defunct vk1od.net <http://www.vk1od.net> which is gone but still indexed on archive.org <http://www.archive.org>) where he disputes the efficiency claims about those helically loaded loop antennas.

http://owenduffy.net/blog/?p=1854

His conclusion: Equivalent performance is obtained from the same size octagon of 1.6mm diameter wire.

Andy

10720. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 06:13:54 UTC
From: Andy
Topic: 10701 Message: 10720

"In addition he's using PVC as a former to wind the copper foil around - that's a q-killer right there."

Interesting that you say that. I have been able to obtain very little evidence, and none of it concrete, to say that PVC has any detectable loss on HF. Care to elaborate?

Regards,
another Andy

10721. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 14:02:33 UTC
From: jwin95@...
Topic: 10701 Message: 10721

Beware the conclusions of Mr. Duffy. Best to bring along your lawyer and experimental physicist when reviewing his work. While he may be correct in a large number of circumstances, it is in the "fine details" (in the assumptions in any given analysis) which leads to incorrect results in the overall.

Also, there are limitations in the so-called 'loop calculators'; no one has addressed this particular issue that I am aware of by rigorously verifying calculated results against measurements. I find the calculators are erroneous (at a minimum) when loop circumferences approach 1/4 Lambda.

It is a simple enough exercise to calculate skin depth for a given material then use that in calculations for effective loop 'resistance' that I try to avoid the calculators when looking at potential losses in loops.

For instance, for round materials:

Clemson Vehicular Electronics Laboratory: Round Wire Resistance Calculator
http://www.cvel.clemson.edu/Emc/calculators/Resistance_Calculator/round.html

http://www.cvel.clemson.edu/Emc/calculators/Resistance_Calculator/round.html

Clemson Vehicular Electronics Laboratory: Round Wire Res...
http://www.cvel.clemson.edu/Emc/calculators/Resistance_Calculator/round.html

View on www.cvel.clemson.edu
http://www.cvel.clemson.edu/Emc/calculators/Resistance_Calculator/round.html
Preview by Yahoo

And wire:

Clemson Vehicular Electronics Laboratory: Wire Gauge Resistance
http://www.cvel.clemson.edu/emc/calculators/Resistance_Calculator/wire.html

Calculator http://www.cvel.clemson.edu/emc/calculators/Resistance_Calculator/wire.html

http://www.cvel.clemson.edu/emc/calculators/Resistance_Calculator/wire.html

Clemson Vehicular Electronics Laboratory: Wire Gauge Res...
http://www.cvel.clemson.edu/emc/calculators/Resistance_Calculator/wire.html

View on www.cvel.clemson.edu
http://www.cvel.clemson.edu/emc/calculators/Resistance_Calculator/wire.html
Preview by Yahoo

In regards, to helical loop advantages, it does serve to reduce the capacitance required to achieve resonance, given a particular loop diameter, a factor which could be used to advantage to meet certain goals (e.g. restricting loop size for practical-use reasons.) I have experimented with inserted in larger loops (at low frequencies) to reduce the amount

of capacitance required to achieve resonance.

Jim

10722. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 14:11:05 UTC
From: jwin95@...
Topic: 10701 Message: 10722

Another Andy,

I have achieved roughly twice the Q in a coil by switching from PVC to HDPE (polyethylene) as coil forms at 7 MHz. The losses are due to dielectric (electric field) losses, so the loss in a helically-loaded loop where the mag field is a factor might not present the same losses. In the vicinity of the tuning cap would be the concern. Also, PVC is subject to breakdown and ignition under HV and short creep-paths or where it is depended on for 'insulation'.

If one looks at the technical loss figures (DF, 'loss tangent' etc) for PVC vs HDPE one can see why dielectric losses are notable.

Jim

10723. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 15:28:20 UTC
From: qrp.gaijin@...
Topic: 10701 Message: 10723

In loopantennas@yahoogroups.com, <jwin95@...> wrote :

> I have achieved roughly twice the Q in a coil by switching from PVC [...]
> losses are due to dielectric (electric field) losses, so the loss in a helically-loaded
> loop where the mag field is a factor might not present the same losses.

But isn't winding the copper strap around the PVC support in essence the same as winding copper wire around that PVC support? If the latter suffers from dielectric losses, wouldn't the former as well?

Anyway, the claim that adding loading inductance to a small loop antenna can increase the loop's efficiency (by supposedly increasing the radiation resistance without increasing the physical loop diameter, and by supposedly reducing the conductor losses below those of a solid conductor) is supported neither by logic nor by any quantitative, repeatably-measurable, and falsifiable data. For practical construction reasons an argument might be made for helical winding, but not for efficiency. At least not with any data that's been shown so far (and no, QSOs don't count).

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10724. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 15:50:50 UTC
From: jwin95@...
Topic: 10701 Message: 10724

Not the same. My turns were adjacent using 10 ga. Teflon jacketed copper on a 4 inch diam form versus 3" copper strap comprising a loop where just a fraction of the 'volume' is occupied by PVC material.

Look at the dv/ds (delta voltage / delta distance) in the two cases and where the electric fields lie.Maybe if you sketched out where the electric lines of flux appeared it would help visualize this for the two cases.

BTW, where is the claim made that this increases the loop's efficiency? This appears to be a repeated meme by some, but does not appear on the primary source's web page on this subject.

On the subject of verifying antenna claims, I have seen only one gentleman on the 'net who has done valid comparative antenna testing, and that was using WSPR and two transmitters on two different WSPR freqs (on the same band, of course) to assure both antennas saw identical prop conditions during each of the 2 minute transmit cycles.

Switching between two antennas during a QSO can easily 'show up' differences of 6 to 10 dB, but with changing fade characteristics even this can be iffy if an insufficient number of 'samples' are taken.

Jim

10725. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 15:51:55 UTC
From: Richard (Rick) Karlquist
Topic: 10701 Message: 10725

On 8/27/2014 11:13 PM, Andy ai.egrps@... [loopantennas] wrote:
> "In addition he's using PVC as a former to wind the copper foil
> around - that's a q-killer right there."
>
> Interesting that you say that. I have been able to obtain very little
> evidence, and none of it concrete, to say that PVC has any detectable
> loss on HF. Care to elaborate?
>
> Regards,
> another Andy

It is well documented that PVC has a dissipation factor of around 2%.
If you don't believe that, measure the loss in vinyl zip cord used
as RF transmission line.

If used as a coil form, it is not so straight forward to determine
the effect of loss due to the PVC form. It doesn't cause loss
due to the dominant magnetic fields, but only the electric fields.
The coil can be thought of as a helical transmission line, so
there will be some additional loss due to dielectric loss in the PVC.
This may or may not be significant compared to the copper loss.

It is also worth noting that skin effect causes the RF current
to flow mainly on the edges of the copper strap, thus wasting
most of the copper. Round conductors have lower copper losses
because they don't have edges. This forces the current distribution
to be fairly uniform for maximum utilization of the copper.

Thus the truth is somewhere in between "q-killer" and "no detectable
loss".

Rick N6RK

10726. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 16:24:03 UTC
From: qrp.gaijin@...
Topic: 10701 Message: 10726

In loopantennas@yahoogroups.com, <jwin95@...> wrote :

> BTW, where is the claim made that this increases the loop's efficiency?
> This appears to be a repeated meme by some

It is a repeated meme by the antenna inventor.

Quote by K8NDS at http://www.eham.net/ehamforum/smf/index.php?topic=85149.50 http://www.eham.net/ehamforum/smf/index.php?topic=85149.50 :"if you understood my design; it works as good as a full sized mag loop being at least 30% smaller in diameter then loop calculations".

Quote by R. Fusinski at https://www.youtube.com/watch?v=2YpyLAULKqg https://www.youtube.com/watch?v=2YpyLAULKqg: "This magnetic loop antenna is about 50% smaller in diameter then a text book magnetic loop. The performance is outstanding, it compares or is better then a 1/2 wave dipole mounted 1/2 wave above ground."

Quote by K8NDS at http://www.eham.net/articles/26572 http://www.eham.net/articles/26572: "I have designed a 6ft diameter loop that has the characteristics of a 80 meter loop that seems to emulate a 10 to15 ft diameter loop of a single conductor [...] I have raised the radiation resistance considerably while only raising the IR losses slightly".

Quote by K8NDS at http://www.hlmagneticloopantennas.com/ http://www.hlmagneticloopantennas.com/: "By implementing a helically wound design a 6ft diameter 80 meter text book loop seems to emulate a 10 to 15 ft diameter loop of a single conductor. [...] This allows the use of a thin flat copper conductor which provides more surface area then a heavy copper pipe while still providing a large surface area of RF skin depth. At the same time the radiation resistance is raised considerably while only raising the IR losses slightly. [...] The result is a two part gain; the same length of copper conductor that is required for a 10 ft diameter loop equates to similar performance wound on a 6 ft diameter substrate; thus reducing the size, weight and cost while still retaining the performance."

Quote by K8NDS at https://groups.yahoo.com/neo/groups/Helically_Loaded_Mag_Loop/conversations/topics/161 https://groups.yahoo.com/neo/groups/Helically_Loaded_Mag_Loop/conversations/topics/161: "My new 40 to 15 meter design, remember even though only 39 inches uses 22 ft of conductor 3 inches wide. If you use 22 ft circumference conductor as a reference plus the helix adds Z to it. You then come up with at least equivalent diameter of 7 ft. [...] So going back to 7 ft, 7 ft gives us around 81% efficiency."

And again, all you have to do is try to follow along with the calculations at http://antennastealth.com/calculate-a-helical-loop.html http://antennastealth.com/calculate-a-helical-loop.html and you'll see where a fictitious hypothetical larger loop diameter (that could have been formed, but was not formed, if the helix were to be unwound and formed into a larger-circumference loop) is incorrectly used as the physical loop diameter in AA5TB's loop calculator, which gives unrealistically large

values for radiation resistance and efficiency. The erroneous calculation (and the underlying logic that leads to it) shown on that page goes a long way towards explaining the questionable claims made about the helical loop's efficiency.

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10727. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 17:44:22 UTC
From: jwin95@...
Topic: 10701 Message: 10727

And, of course, you have verified by experiment and experimental means that each of those claims is untrue? Simply citing the results of numerical 'design' recipes is not sufficient in explaining the reason the concept fails in physics.

I wasn't aware of the claims made on the Youtube video, only referencing his website where his claims are a little more rational (doing a keyword search on "efficiency" on www . hlmagneticloopantennas . com); no claims of performance equalling an 80 meter dipole 1/2 wave above ground for instance. Perhaps in producing the website at a later date a more objective view was taken on the subject.

You are aware of the mechanism by which loops work, with the EMF being differentially induced in the two arms as the incoming RF wave propagates forward first encountering the one arm of the loop followed by an encounter with the second arm? With the added 'length' of each arm by helically coiled copper strap, does this in any way affect the induction of EMF in the two arms? The effect of slight additional delay in summing the two arms is also a factor, as the upper and lower 'conductors' in the loop are also helical conductors.

BTW, have you by any chance sketched out where the lines of electric force exist on the helical loop antenna versus a tightly wound coil vis-a-vis PVC coil forms and antenna support forms?

Jim

10728. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 18:22:16 UTC
From: 3ym3ym@...
Topic: 10701 Message: 10728

And, of course, you have verified by experiment and experimental means that each of those claims is untrue? A general note about testing claims. There are two criteria any claim must meet: to be internally logically consistent and to not contradict known experimental results. If a claim fails any of these, there is no point in investigating it, it would be a wasted effort.

With the added 'length' of each arm by helically coiled copper strap, does this in any way affect the induction of EMF in the two arms?
No, it doesn't. The total EMF is an integral over all small elements of the loop. The orientation of the element is important: the function under the integral is a vector multiplication of the direction of the element and the magnetic field vector. If you do the math carefully, the total EMF does not depend that much on the "fine structure" of the loop conductor, especially for small loops. The only factor that has the proportional effect on EMF is the loop area.

73, Mike

10729. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 20:34:29 UTC
From: jwin95@...
Topic: 10701 Message: 10729

Mike, thank you for answering for the other gentleman, but, I would like to see how this squares with the depictions in Keen 1927 (reference figures 6 through 9) on the subject of loops and the mechanism for inducing a signal into a loop from a propagating wave.

I have no doubt in the elementary form of a loop what you state holds true. One should also at this point realize that the Keen material has merit in that his approach provides for, or accounts for the 90 degree difference in 'observed phase' between the signal induced into an 'open aerial' (IOW a vertical or sense antenna) versus a loop, and is the reason why in direction finders of yesteryear circuitry was incorporated in the receiver to put 'in phase' the signals seen on the 'sense' antenna and the 'loop' antenna.

We are all familiar with this axiom (based on measurement and physics), I assume (from wiki on antenna aperture):

"In general, the aperture of an antenna is not directly related to its physical size."

Or this from W8JI:

"For example a 1/2 wave long dipole in freespace has a capture area of about .13λ^2. This means a lossless freespace dipole has an Ae of approximately .13 square wavelengths. This effective aperture is about 100 times larger than the actual physical area of a thin wire dipole antenna. Energy is extracted from an elliptically shaped area slightly longer than the dipole and about 1/4 wave diameter at the center."

Has this 'principle', for a tuned wire/conductor antenna:

. . . . . antenna aperture > physical area

been ignored as it applies to loops in general?

Jim

---In loopantennas@yahoogroups.com, <3ym3ym@...> wrote :

And, of course, you have verified by experiment and experimental means that each of those claims is untrue? A general note about testing claims. There are two criteria any claim must meet: to be internally logically consistent and to not contradict known experimental results. If a claim fails any of these, there is no point in investigating it, it would be a wasted effort.

With the added 'length' of each arm by helically coiled copper strap, does this in any way affect the induction of EMF in the two arms?
No, it doesn't. The total EMF is an integral over all small elements of the loop. The orientation of the element is important: the function under the integral is a vector multiplication of the direction of the element and the magnetic field vector. If you do the math carefully, the total EMF does not depend that much on the "fine structure" of the loop conductor, especially for small loops. The only factor that has the proportional effect on EMF is the loop area.

73, Mike

10730. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 20:44:02 UTC
From: jwin95@...
Topic: 10701 Message: 10730
Attachments: 3 described; binary payloads are missing from this source WARC

I have attached figures 6, 9 and 10 from Keen 1927.

Jim

10731. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 01:39:32 UTC
From: qrp.gaijin@...
Topic: 10701 Message: 10731

In loopantennas@yahoogroups.com, <jwin95@...> wrote :

> And, of course, you have verified by experiment and experimental
> means that each of those claims is untrue?

No, I have not. The antenna inventor making the claims bears the burden of proof.

For a given small transmitting loop of diameter D, the claims of (a) being able to the reduce the diameter by 30% while maintaining identical performance and (b) being able to significantly increase the radiation resistance above that of a solid-conductor loop through the helical winding are startling claims and, if supported by quantifiable, repeatable, and falsifiable data such as that obtained through controlled field strength tests, would deserve further investigation. For me, only insufficient and inconclusive data and methods have yet been presented, that do not yet warrant that level of investigation.

> With the added 'length' of each arm by helically coiled copper
> strap, does this in any way affect the induction of EMF in the
> two arms? The effect of slight additional delay in summing the
> two arms is also a factor, as the upper and lower 'conductors'
> in the loop are also helical conductors.

That is a very good question, and is one that I raised 2 years ago in the eham.net forum here:

http://www.eham.net/ehamforum/smf/index.php/topic,85149.msg622196.html#msg622196
http://www.eham.net/ehamforum/smf/index.php/topic,85149.msg622196.html#msg622196

There I asked, "Is it conceivable that the helical winding alters the current flow such that the flows in opposing conductors 'fight' each other to a lesser degree? [...] I suppose one would also need to consider current flow within each small helical turn and between turns as well".

N3OX conducted a NEC-2 analysis and replied:

http://www.eham.net/ehamforum/smf/index.php/topic,85149.msg622236.html#msg622236
http://www.eham.net/ehamforum/smf/index.php/topic,85149.msg622236.html#msg622236

I will quote the main conclusion of his NEC-2 analysis:

N3OX wrote: "There's a lot of field cancellation of each small turn in terms of the influence on the diametrically opposite side of the loop, so the main important component of the current is still the 'axial' or 'along the big loop' component. The 'around the turns'

component will mostly cancel way over on the other side of the big loop, just like a magloop mostly cancels in the far field. So there's not much effect there."

There is of course the argument that NEC-2 cannot properly model this sort of a structure. I went a step further and created a 3D model of a helical loop antenna wound with a thin strap. I uploaded an image of my 3D model to the Files section of the loopantennas group under the filename "helical-loop-3d-model.jpg". The eventual goal was to import this into a 3D electromagnetic field solver that uses the Finite Difference Time Domain (FDTD) method, to compute the structure's radiation resistance and ohmic loss, and also to enable the visualisation of the RF current flow along the strap. These efforts are stalled at this point because it takes considerable time and effort to prepare the model structure for import into the FDTD package, as well as to understand the simulator limitations (FDTD seems somewhat weak when it comes to simulating skin effect, requiring a ridiculously fine-grained mesh) and to gain confidence in the simulated results. I find it difficult to motivate myself to continue further serious investigation of the antenna because the basic claims of performance gains and the proposed theory of operation haven't crossed my personal threshold of credibility for requiring further scrutiny.

If someone is seriously interested in conducting a 3D electromagnetic field simulation of a helically wound loop, I am willing to make my 3D model files available - but again, I don't expect any startlingly high efficiency from the simulation - just a slightly lowered efficiency due to the increased current path length. I'm sure many hams are happy with that level of performance.

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10732. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 02:36:56 UTC
From: qrp.gaijin@...
Topic: 10701 Message: 10732

In loopantennas@yahoogroups.com, <richard@...> wrote :

> It is also worth noting that skin effect causes the RF current
> to flow mainly on the edges of the copper strap, thus wasting
> most of the copper.

I read somewhere a brief comment by W8JI that the current distribution on a strap changes when you form the strap into a coil - which only makes sense. I seem to recall W8JI was saying that the current flow on the strap is forced back towards the center - but I may be remembering incorrectly. Unfortunately I can't find the comment now - it was just a brief comment as part of an online discussion.

G3RBJ also has a paper that may be of interest, though I haven't gone through it closely: http://g3rbj.co.uk/wp-content/uploads/2013/08/The_HF_Resistance_of_Single_Layer_Solenoids_2.pdf http://g3rbj.co.uk/wp-content/uploads/2013/08/The_HF_Resistance_of_Single_Layer_Solenoids_2.pdf

Section 4 on page 6 is titled "4. RESISTANCE OF A COIL WOUND WITH THIN CONDUCTING STRIP".

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10733. Re: [loopantennas] Re: Skin effect and flat straps

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 03:01:20 UTC
From: qrp.gaijin@...
Topic: 10701 Message: 10733

In loopantennas@yahoogroups.com, <richard@...> wrote :
> It is also worth noting that skin effect causes the RF current
> to flow mainly on the edges of the copper strap, thus wasting
> most of the copper.

In loopantennas@yahoogroups.com, <qrp.gaijin@...> wrote :

> I read somewhere a brief comment by W8JI that the current
> distribution on a strap changes when you form the strap into a coil

The W8JI comment is here:
http://forums.qrz.com/showthread.php?88584-THEORETICAL-QUESTION&p=518180#post518180
http://forums.qrz.com/showthread.php?88584-THEORETICAL-QUESTION&p=518180#post518180

Quote by W8JI: "At radio frequencies current bunches up at the very edges of any wide flat conductor. [...] When a conductor is coiled, the interactions become much more complex. RF current tends to move in towards the center axis of a solenoid coil and away from the outside edges of the conductor used to make a inductor. [...] basically when the conductor is coiled a ribbon and a round wire behave very similar, with both having most of the current on the inner areas of the conductor nearest the coil axis. [...] Ribbon has the advantage of having less turn-to-turn capacitance for a given loss resistance, and that can increase Q. Inductance winds up being about the same at frequencies well below self-resonance."

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10734. Re: [loopantennas] Re: Skin effect and flat straps

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 03:30:43 UTC
From: Richard (Rick) Karlquist
Topic: 10701 Message: 10734

> The W8JI comment is here:
> http://forums.qrz.com/showthread.php?88584-THEORETICAL-QUESTION&p=518180#post518180
>
> Quote by W8JI: "At radio frequencies current bunches up at the very
> edges of any wide flat conductor. [...] When a conductor is coiled, the
> interactions become much more complex. RF current tends to move in
> towards the center axis of a solenoid coil and away from the outside
> edges of the conductor used to make a inductor. [...] b! asically when
> the conductor is coiled a ribbon and a round wire behave very similar,
> with both having most of the current on the inner areas of the conductor
> nearest the coil axis. [...] Ribbon has the advantage of having less
> turn-to-turn capacitance for a given loss resistance, and that can
> increase Q. Inductance winds up being about the same at frequencies well
> below self-resonance."
>
This sounds like Tom is referring to an EDGE WOUND coil ... until he
says the capacitance is lower, which would appear to refer to the
other orientation.

Rick N6RK

10735. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 10:43:19 UTC
From: Jean-L. RAULT
Topic: 10701 Message: 10735

PVC is lossy when exposed to microwaves. If you put a piece of (grey)
PVC in a microwaves oven (running at 2.4 GHz), you'll see that its
temperature is increasing.

However I have some doubts about any PVC losses at very low frequencies ...

Jean-Louis F6AGR

Le 28/08/2014 06:13, Andy ai.egrps@... [loopantennas] a écrit :
> "In addition he's using PVC as a former to wind the copper foil
> around - that's a q-killer right there."
>
> Interesting that you say that. I have been able to obtain very little
> evidence, and none of it concrete, to say that PVC has any detectable
> loss on HF. Care to elaborate?
>
> Regards,
> another Andy
>
>
>
> ---
> Posted by: Andy <ai.egrps@...>
> ---
> <https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/10720;_ylc=X3oD
MTJybDlsZXAxBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDcyMA
RzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0MDkyMDY0NzU-?act=reply&messageNum=10720>
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10736. RE: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-28 12:23:53 UTC
From: pbunn
Topic: 10701 Message: 10736
Attachments: 1 described; binary payloads are missing from this source WARC

The LF Experimental license holders are using PVC as core for very large inductors. These run at high power levels (2KW). I have one matching inductor for my 74KHz antenna that I have run at over 1KW and have seen no signs of poor Q. The Q may be somewhat less than air but not near as bad as some state.

WG2XCT
From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Thursday, August 28, 2014 2:14 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re:

"In addition he's using PVC as a former to wind the copper foil around - that's a q-killer right there."

Interesting that you say that. I have been able to obtain very little evidence, and none of it concrete, to say that PVC has any detectable loss on HF. Care to elaborate?

Regards,
another Andy

10737. Losses with multi-turn loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 11:42:03 UTC
From: Andrew Ikin
Topic: 10737 Message: 10737

Hello Group

http://www.dtic.mil/dtic/tr/fulltext/u2/736984.pdf

Provides some useful info. into (proximity) losses with multi-turn loops; relationship with conductor diameter verses conduct spacing.

73

Andrew Ikin

10738. Re: Losses with multi-turn loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 12:05:37 UTC
From: qrp.gaijin@...
Topic: 10737 Message: 10738

In loopantennas@yahoogroups.com, <andrew.ikin@...> wrote :

> http://www.dtic.mil/dtic/tr/fulltext/u2/736984.pdf
http://www.dtic.mil/dtic/tr/fulltext/u2/736984.pdf
> Provides some useful info. into (proximity) losses with multi-turn loops;
> relationship with conductor diameter verses conduct spacing.

G3RBJ has recently (2013) cast some doubt on some of the results (the proximity effect results) presented in that 1971 Smith paper:

http://g3rbj.co.uk/wp-content/uploads/2013/08/The_HF_Resistance_of_Single_Layer_Solenoids_2.pdf http://g3rbj.co.uk/wp-content/uploads/2013/08/The_HF_Resistance_of_Single_Layer_Solenoids_2.pdf

Quote from G3RBJ: "Taken together the above two graphs place considerable doubt on Smith's data, and suggest that his measurements were of a coil rather than the isolated conductors as he intended. [...] Smith's data for multiple parallel isolated conductors is not at all in agreement with the theory given here. However, if it is assumed that Smith's measurements are of a coil, rather than isolated conductors as he intended, then his measurements are consistent with the theory."

For more information, search the G3RBJ paper for the word "Smith".

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10739. RE: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 15:20:03 UTC
From: jwin95@...
Topic: 10701 Message: 10739

If you will take note, the PVC 'molecule' exhibits polar characteristics, much like water (water is a 'polar' molecule) and subject to dielectric heating when subjected to rapidly changing high-value electric fields. At lower frequencies the heating (the loss) may not be as great as at say 7 MHz (where I saw decreased Q and heating even) as it is at 60 Hz or 74 kHz.

pvc.org: "PVC has an amorphous structure with polar chlorine atoms in the molecular structure. Having chlorine atoms and the amorphous molecular structure are inseparably related. Although plastics seem very similar in the context of daily use, PVC has completely different features in terms of performance and functions compared with olefin plastics which have only carbon and hydrogen atoms in their molecular structures."

From wiki:

Electrical properties

PVC is a polymer with good insulation properties but because of its higher polar nature the electrical insulating property is inferior to non polar polymers such as polyethylene and polypropylene.

As the dielectric constant, dielectric loss tangent value and volume resistivity are high, the corona resistance is not very good, it is generally suitable for medium or low voltage and low frequency insulation materials.
- - - - - -

Jim

10740. Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-29 20:15:13 UTC
From: Richard (Rick) Karlquist
Topic: 10701 Message: 10740

There has been some discussion about the difficulty of modeling a helical loaded loop. In the case of a helically loaded vertical, we know that there is nothing magic about helical loading compared to lumped element inductor loading. IOW, a series of lumped coils will do much the same thing as helical loading.

EZNEC, according to the manual, can model square loops down to 0.05 wavelength perimeter, with one segment per side. I modeled a .1 wavelength loop, putting a current source in one side and loads in the other three sides. If there were anything to the helical loading concept, I should be seeing similar effects in this simple model. I included a receiving antenna 10 wavelengths away consisting of a half wave dipole loaded with 1000 ohms. The wires were 0.001 wavelength diameter. Modeling was done in free space.

I started with the loads set to zero, and the loop modeled as expected, 1.6 dBi gain, 0.013 ohms driving resistance. Then I tried setting the loads to various values of inductive reactance. As they were increased, the driving point resistance increased. For example, with three 100 ohm loads, it was 0.024 ohms. The gain with this loading decreased to -0.48 dBi. The power from the current source, of course, roughly doubled. However, the received power in the receiving antenna only went up about 20%. The loading coils decreased the efficiency. Going beyond 100 ohms results in the loop beaming broadside and the polarization flips. Have the helically loaded loops claimed to beam broadside?

Now here is what I think the misunderstanding is: you might think that since the driving resistance nearly doubled, then the "radiation resistance" also doubled. Then the helical loaded loop would seem to make sense. However, this is based on a misunderstanding of the definition of radiation resistance. The effect of the loading acts more like using multiple turns on a loop to increase the driving resistance. That is the same as simply putting a transformer between the source and loop, which of course has no effect on efficiency. How do we know this? Because the EZNEC model shows a decrease in efficiency when the loading is added.

I tried adding resistance to account for a coil Q of 1000. This additional resistance only served to decrease the efficiency by over 10 dB. Thus real world coils are either too low in inductance to do anything at all, or their resistance adds significant losses, even with a Q of 1000. We can be quite certain that helically wound strap does not have anything approaching this kind of Q.

Rick N6RK

10741. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-30 13:12:20 UTC
From: jwin95@...
Topic: 10701 Message: 10741

Rick, since I have seen differences between 'real life' and what NEC-2 based MOM modelers yield regarding loop antennas, I don't have quite the 'faith' you do in their infallibility. Were it not for the fact that a helical loop is not a simple planar (2-space) structure but occupies a non-trivial amount of volume in 3-space I would still like to see a basis-in-physics explanation outside of the reliance of the usual modeling programs.

Yet to be explained as well is the phenom where Ae > physical size as it may apply to loops.

Jim

10742. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-30 13:31:37 UTC
From: Andy Gardner
Topic: 10701 Message: 10742

Hi another Andy,

http://www.kayelaby.npl.co.uk/general_physics/2_6/2_6_5.html

Loss tangent is the last column. The lower, the better.

Compare PTFE to PVC.

Also, PVC for use in sunlight often has lead in the mix, although they are slowly phasing that out. It's not elemental lead, but still...

http://www.pvc.org/en/p/lead-stabilisers

Andy
ZL3AG

On 28/08/2014, at 6:13 PM, Andy ai.egrps@... [loopantennas] wrote:

>
> "In addition he's using PVC as a former to wind the copper foil around - that's a q-killer right there."
>
> Interesting that you say that. I have been able to obtain very little evidence, and none of it concrete, to say that PVC has any detectable loss on HF. Care to elaborate?
>
> Regards,
> another Andy

10743. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-30 17:02:48 UTC
From: Richard (Rick) Karlquist
Topic: 10701 Message: 10743

On 8/30/2014 6:12 AM, jwin95@... [loopantennas] wrote:
> Rick, since I have seen differences between 'real life' and what NEC-2
> based MOM modelers yield regarding loop antennas, I don't have quite the
> 'faith' you do in their infallibility. Were it not for the fact that a
> helical loop is not a simple planar (2-space) structure but occupies a
> non-trivial amount of volume in 3-space I would still like to see a
> basis-in-physics explanation outside of the reliance of the usual
> modeling programs.

It would be very easy to build a loop and put in lumped element inductors to experimentally verify that magic happens or doesn't happen. But consider this thought experiment. If the loop radiation resistance is only 0.013 ohms, any coils you insert with more than a few dozen ohms of reactance add significant losses relative to 0.013 ohms. But a few dozen ohms of reactance has negligible effect on anything. A helically wound strap is not a free lunch. The total conductor path is longer and narrower, hence increasing losses.

It has been experimentally verified countless times that helically loaded verticals have no special properties compared to conventional loading coils. Why should it be different with loops?

>
> Yet to be explained as well is the phenom where Ae > physical size as it
> may apply to loops.

What is it that hasn't been explained? Lots of antennas have Ae > physical size. That doesn't mean that helically wound loops have additional Ae. Where physical size comes into play is that you cannot simultaneously have small physical size and high efficiency without extremely narrow bandwidth and limited power handling due to the necessarily high loaded Q. The proof of this is independent of how the antenna is constructed. The article originally cited makes no mention of bandwidth.

Rick N6RK

10744. Re: [loopantennas] Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-31 01:28:50 UTC
From: Maxwell Mclellan
Topic: 10701 Message: 10744

G'day all from the antipodes. I write to offer an observation, not to Jim but to all. Theory and modelling is mostly humbug! The only real test of any device is how it performs in the REAL WORLD! Make it measure it and then pontificate. Anything else is just hot air. Once the accepted wisdom was that the earth was flat and bumblebees could not fly! I rest my case. Regards to all vk2tti.

Sent from my iPad

> On 29 Aug 2014, at 3:44 am, "jwin95@yahoo.com [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> And, of course, you have verified by experiment and experimental means that each of those claims is untrue? Simply citing the results of numerical 'design' recipes is not sufficient in explaining the reason the concept fails in physics.
>
>
> I wasn't aware of the claims made on the Youtube video, only referencing his website where his claims are a little more rational (doing a keyword search on "efficiency" on www . hlmagneticloopantennas . com); no claims of performance equalling an 80 meter dipole 1/2 wave above ground for instance. Perhaps in producing the website at a later date a more objective view was taken on the subject.
>
>
> You are aware of the mechanism by which loops work, with the EMF being differentially induced in the two arms as the incoming RF wave propagates forward first encountering the one arm of the loop followed by an encounter with the second arm? With the added 'length' of each arm by helically coiled copper strap, does this in any way affect the induction of EMF in the two arms? The effect of slight additional delay in summing the two arms is also a factor, as the upper and lower 'conductors' in the loop are also helical conductors.
>
>
> BTW, have you by any chance sketched out where the lines of electric force exist on the helical loop antenna versus a tightly wound coil vis-a-vis PVC coil forms and antenna support forms?
>
> Jim
>
>

10745. Theory is humbug?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-08-31 07:51:46 UTC
From: dx11
Topic: 10745 Message: 10745

Theory is nothing else than a way of describing reality. Theory makes it possible to predict the behavior of a device before it exists and makes it possible to explain its behavior when it exists.

“Make it” and “” Measure it” are sensible and even necessary stages in any product development project.

But before the “Make it” phase there is a phase where it is decided what to make, the design phase.

That phase is based on some theory even if you’re not aware of it.

After the “measure it” there is an evaluation phase where it is analyzed why the device is performing as it did in the test and why it is performing better or worse than a different design.

This also is based on theory.

So the good application of theory (part of that is modelling) is absolutely necessary in the development of new products that perform better than the previous products.

Without theory there is no innovation, no improvement.

So if you don’t want to apply theory, don’t make anything new, it is a waste of time. Just copy what others have designed (with the use of theory).

Regards,

Cor Beijersbergen PA4Q

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: zondag 31 augustus 2014 3:29
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re:

G'day all from the antipodes. I write to offer an observation, not to Jim but to all. Theory and modelling is mostly humbug! The only real test of any device is how it performs in the REAL WORLD! Make it measure it and then pontificate. Anything else is just hot air. Once the accepted wisdom was that the earth was flat and bumblebees could not fly! I rest my case. Regards to all vk2tti.

Sent from my iPad

10746. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-01 09:14:09 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10746

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10747. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-01 09:14:09 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10747

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10748. SWR trouble with MFJ 1788 loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-02 19:40:02 UTC
From: ve3wdm@...
Topic: 10748 Message: 10748

I have been off the air for the last week or so (off the air using the MFJ 1788 that is) today I wanted to use it and it's set up on my balcony. The problem is the SWR on 15 and 20m I am only able to get the SWR to 2.0.1 where in the past I could almost get it flat. The weather is very humid out and I was wondering if that could be the issue as nothing else has changed in the antenna system.....other than not using it for a week?
Mike
VE3WDM

10749. Re: [loopantennas] SWR trouble with MFJ 1788 loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-02 20:46:16 UTC
From: Paul Stoetzer
Topic: 10748 Message: 10749

I have definitely noticed SWR changing on my 1786 due to humidity and temperature.

73,

Paul, N8HM

On Tue, Sep 2, 2014 at 3:40 PM, ve3wdm@hotmail.com [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> I have been off the air for the last week or so (off the air using the MFJ
> 1788 that is) today I wanted to use it and it's set up on my balcony. The
> problem is the SWR on 15 and 20m I am only able to get the SWR to 2.0.1
> where in the past I could almost get it flat. The weather is very humid out
> and I was wondering if that could be the issue as nothing else has changed
> in the antenna system.....other than not using it for a week?
> Mike
> VE3WDM
>
>
>
>
>

10750. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-04 15:30:58 UTC
From: jwin95@...
Topic: 10701 Message: 10750

Rick,

It has still not been explained how Ae > physical_size on any antenna, let alone loops.

The only thing that has been 'explained' is that the phenom exists, and that is not an explanation in physics as to _why_ the phenom exists nor how it comes about. Just grand 'hand waves' exist as far as I have seen. Even the MIT online EM course video lectures do not address this issues (or maybe I missed that part of a course). And please, save the lecture about the trade-off for B-E-S (BW, EFF and SIZE; pick any two the the 3rd is a given) for the newbies.

The only material remotely addressing this is far above the pay grade (and ed level) of most 'ham and egg' operators and lies in the field of actual physics, e.g. as this paper:

“Resonant energy absorption and the CTF hypothesis“
Michael Ambroselli ; Chandra Roychoudhuri
Proc. SPIE 8832, The Nature of Light: What are Photons?
V, 88320T (October 1, 2013); doi:10.1117/12.2024126
http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1747250
http://proceedings.spiedigitallibrary.org/proceeding.aspx?articleid=1747250
Abstract
Antennas in resonant circuits can present an effective energy absorption cross-section much larger than its physical dimensions to the impinging EM waves.
Similarly, atoms can absorb energy from fields with energy densities so low that the atom must have an effective interaction cross-sectional diameter on the order of tens of microns. It appears that resonant energy absorption exhibits a sort of “suction” effect by the absorbing dipole, or a “pushing” effect by the field, or a combination of both. This allows the field energy to converge from a larger volume into a smaller region. We will argue that this effect may actually correspond to the field preferentially directing energy into such resonant systems, and discuss how this provides further evidence for the utility of our proposition of a universal, complex tension field (CTF). We have proposed that CTF can support propagating field gradients, like EM waves, as well as resonant, localized and self-looped oscillations representing various particles. Different gradients in the CTF, generated by different kinds of particle-oscillations, represent the various forces experienced by particles within each others’ physical domain. Even time emerges as a secondary property.

Jim

10751. Re: SWR trouble with MFJ 1788 loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-05 10:03:36 UTC
From: ve3wdm@...
Topic: 10748 Message: 10751

Thanks Paul I wanted to check with other owners of the loop before I started taking apart for no reason. Mike
VE3WDM

10752. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-05 16:59:07 UTC
From: gnuarm.2007@...
Topic: 10701 Message: 10752

Perhaps it will help if you realize that the aperture is just a number calculated from the way the antenna picks up the signal. It does not represent the real size of the antenna. I believe it is very analogous to numerical aperture (NA) in optics which also is not truly the size of the lens but a measure of the amount of light it can pick up. For example for some applications a lens is used with a liquid between the lens and the object being looked at. The liquid does not increase the size of the lens but increases the NA.

Optics is not electronics so maybe this is not a great analogy, but perhaps this can help you.

Rick (a different Rick)

10753. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-06 13:54:01 UTC
From: jwin95@...
Topic: 10701 Message: 10753

Rick,

It isn't 'help' I'm seeking. It's an explanation in physics I'm looking for to explain observed phenomenon. Perhaps this distinction has not been made clear. Now it has been. The paper I referenced earlier is in the vein of what I am seeking (and obviously found), as opposed to continued 'grand hand waves' by most antenna experts and physicists even.

Maybe it would help you to visualize what I'm getting at - If you have ever seen a waveguide to coax adapter ask yourself how it is that the little 'probe' is able to so efficiently 'channel' all the RF from out of the waveguide and into the coaxial element, and do so with low insertion loss and a respectable 'return loss' (SWR or 'match') as well.

There is more going on with 'simple' antennas even (e.g. dipoles and verticals) than is commonly conveyed by articles and discussions on these subjects. At the 'ham and egg' operator level such detailed and nuanced understanding is obviously not necessary, but we have gone beyond that as we dissect various forms of tuned loops and understand what determines their theoretical limitations from the stand point of physics.

Jim

10754. Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-06 21:41:35 UTC
From: enriqueeeeee2001@...
Topic: 10754 Message: 10754

Hello,

I have built a half delta flag antenna, 13ft x 9ft, but I am not very happy with the nulls.
I have tested a 1070 Ohms terminating resistor and tomorrow with a 950 Ohms.

I suppose that when adjusting the resistor the MW receiver must be in the center of the band or at the end?
Surfing the web I have seen that some people use vactrol but this could cause intermodulations.

I have in mind to build a rotatable flag,a 9ft x 6ft rectangular shape since I will not be stuck in a position.

So, would you recommend me to use a vactrol resistor or try with different fixed values, I am using a potentiometer.

Thank you very much
Regards

10755. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-06 23:05:02 UTC
From: Don Sanders
Topic: 10754 Message: 10755

read article yesterday where fellow used relays to remote select resistors for his flag antenna, i guess depending on frequency and position. He stated the use of vactrol was too expensive and too fussy. Possibly using adjustable potentiometers and selecting them remotely may be they way to go. I plan a flag for 160 and 80 soon, so I will try it.

Don HC4/W4BWS

Dr. Don W4BWS

On Sat, Sep 6, 2014 at 4:41 PM, enriqueeeeee2001@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Hello,
>
>
> I have built a half delta flag antenna, 13ft x 9ft, but I am not very
> happy with the nulls. I have tested a 1070 Ohms terminating resistor and
> tomorrow with a 950 Ohms.
>
>
> I suppose that when adjusting the resistor the MW receiver must be in
> the center of the band or at the end?
>
> Surfing the web I have seen that some people use vactrol but this could
> cause intermodulations.
>
>
> I have in mind to build a rotatable flag,a 9ft x 6ft rectangular shape
> since I will not be stuck in a position.
>
>
> So, would you recommend me to use a vactrol resistor or try with
> different fixed values, I am using a potentiometer.
>
>
> Thank you very much
>
> Regards
>
>
>
>
>

10756. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-06 23:33:08 UTC
From: Alex
Topic: 10754 Message: 10756

Use a remotely controlled vactrol. Built one using rad shack led and photocell for my delta loops and can vary the null between 20 and 30 db. This was operational for ground wave up to about 6 to 8 MHz. No resonant effects noted as far as the null was concerned. Using a non controllable resistor will vary the null due to temperature.

10757. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-08 15:56:35 UTC
From: enriqueeeeee2001@...
Topic: 10754 Message: 10757

Thank you for the answer.s I have decided to build a variable resistor with a Vactrol VTC5C4 .

I have found two schemes, the first seems easier to built but I do not understand the components values, capacitors 1uf ? and I see two pots for adjusting or is it one?

http://www.okdxf.eu/lankford/Newer%20Active%20Flag%20And%20Delta%20Flag%20Arrays.pdf
http://www.okdxf.eu/lankford/Newer%20Active%20Flag%20And%20Delta%20Flag%20Arrays.pdf

This is the second, I would be very grateful if somebody could send a proper design:

http://www.qsl.net/wa1ion/flag/flag_antenna.htm
http://www.qsl.net/wa1ion/flag/flag_antenna.htm

Thank you very much

http://www.qsl.net/wa1ion/flag/flag_antenna.htm

Flag Antenna Construction and Test Results http://www.qsl.net/wa1ion/flag/flag_antenna.htm Mark Connelly, WA1ION - 18 JUL 2002 The Flag Antenna is in the family of terminated loops that can yield a cardioid (heart-shaped, single-direction null) pic...

View on www.qsl.net http://www.qsl.net/wa1ion/flag/flag_antenna.htm
Preview by Yahoo

10758. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-08 18:36:53 UTC
From: Andrew Ikin
Topic: 10754 Message: 10758

Enrique,

Looking at Dallas article, the Vactrol LED decoupling capacitor is 1uF. I would recommend a polyester type at say 50V. If this capacitor is placed at the Vactrol end then there is no need to use screened wires. Your should also consider providing static protection for the LDR side of the Vactrol. This can be done with 4 x 1N4148 wired in series plus another 4 diodes connected in the reverse direction. Both sets of diodes connected across the LDR side.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Monday, September 08, 2014 4:56 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Flag antenna resistor

Thank you for the answer.s I have decided to build a variable resistor with a

Vactrol VTC5C4 .

I have found two schemes, the first seems easier to built but I do not understand the components values, capacitors 1uf ? and I see two pots for adjusting or is it one?

http://www.okdxf.eu/lankford/Newer%20Active%20Flag%20And%20Delta%20Flag%20Arrays.pdf

This is the second, I would be very grateful if somebody could send a proper design:

http://www.qsl.net/wa1ion/flag/flag_antenna.htm

Thank you very much

Flag Antenna Construction and Test Results
Mark Connelly, WA1ION – 18 JUL 2002 The Flag Antenna is in the family of terminated loops that can yield a cardioid (heart-shaped, single-direction null) pic...
View on www.qsl.net Preview by Yahoo

10759. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-08 19:28:15 UTC
From: enriqueeeeee2001@...
Topic: 10754 Message: 10759

Hello Andy,

I am testing your FLG100LN, last Saturday I made a lopp, 8mx4m, with a 950 Ohms termination resistor, nulls were acceptable.
Sunday I made a smaller loop, 4x3m, with a 1050 Ohms terminatino resistor but nulls were poorer.

As I said before, I would like to build a 3x2m rotatable version feeded with the active interface. I think I could get good results.

Regarding Dallas article I do not understand the function of the 500 Ohms pot, is it a small PCB variable resistor ? Looking at the other scheme it only has a 1K pot.Is it necessary to play with two pots in Dallas scheme?

What is the value of the 1/10 capacitor, 10uf?
Sorry for these questions I am not very good at electronics.

Thanks for your help

10760. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-08 19:50:53 UTC
From: Andrew Ikin
Topic: 10754 Message: 10760

Enrique,

I suspect that Dallas is using 500 Ohm pot to set the current so that the 1000 Ohm pot provides fine control of the Vactrol resistance. The article does suggest that is set for 270 Ohms. Maybe a 270 Ohm resistor is okay.

The 1/10 capacitor is 1uF at 10Volts. This capacitor is required because the Vactrol LED is non linear and can generate IMD which could be reradiated to the antenna by the control wires. I found this out the hard way when I used to manufacture the K9AY.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Monday, September 08, 2014 8:28 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Flag antenna resistor

Hello Andy,

I am testing your FLG100LN, last Saturday I made a lopp, 8mx4m, with a 950 Ohms termination resistor, nulls were acceptable.
Sunday I made a smaller loop, 4x3m, with a 1050 Ohms terminatino resistor but nulls were poorer.

As I said before, I would like to build a 3x2m rotatable version feeded with the active interface. I think I could get good results.

Regarding Dallas article I do not understand the function of the 500 Ohms pot, is it a small PCB variable resistor ? Looking at the other scheme it only has a 1K pot.Is it necessary to play with two pots in Dallas scheme?

What is the value of the 1/10 capacitor, 10uf?
Sorry for these questions I am not very good at electronics.

Thanks for your help

10761. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-08 21:41:13 UTC
From: enriqueeeeee2001@...
Topic: 10754 Message: 10761

Dear Andy,

I will try with a fixed 270 Ohm resistor then.

Last question, I have an ALA100M mounted in a rotator, 2x2 m, works fine
but I need to use a tuner,grove mini-tuner tun-3, if not there is a lot of
intermodulations. I suspect that the loop is too large, manually this is not a problem
since i choose the swith range in the tuner but I have in mind to buy a SDR and when
recording there will be intermodulations since I want to record from 10 khz to 30Mhz.

Same happens with an ALA100LN, half delta loop 4x3 metres, feeded in the middle of the
vertical side. On SW the signal is excellent but on LW and MW signals are very attenuated
in some cases,on LW, there is no signal.
I have placed an attenuator at the input of the receiver but not significant result.
Again I suspect that I have to make smaller loops.

Thank you for your help.

10762. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-08 22:14:49 UTC
From: Andrew Ikin
Topic: 10754 Message: 10762

Enrique,

If you are using Tuner between the ALA100M/ loop and the Rx, to reduce IMD, then the loop is overloading the receiver. So you may need to reduce the loop area.

The ALA100LN has a nominal input z of 60 Ohms and hence it is designed to the be used with a much larger aperture loop to provide good LW/MW reception. So I wouldn’t expect an IMD issue with your loop size, unless you have high power MW Tx close by. I would suggest that you don’t use any attenuation with this loop. Most users of the ALA100 and the LN version use a 20m circumference loop. The gain of both models is the same.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Monday, September 08, 2014 10:41 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Flag antenna resistor

Dear Andy,

I will try with a fixed 270 Ohm resistor then.

Last question, I have an ALA100M mounted in a rotator, 2x2 m, works fine
but I need to use a tuner,grove mini-tuner tun-3, if not there is a lot of intermodulations. I suspect that the loop is too large, manually this is not a problem since i choose the swith range in the tuner but I have in mind to buy a SDR and when recording there will be intermodulations since I want to record from 10 khz to 30Mhz.

Same happens with an ALA100LN, half delta loop 4x3 metres, feeded in the middle of the vertical side. On SW the signal is excellent but on LW and MW signals are very attenuated in some cases,on LW, there is no signal.
I have placed an attenuator at the input of the receiver but not significant result.
Again I suspect that I have to make smaller loops.

Thank you for your help.

10763. Re: [loopantennas] Flag antenna resistor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-09 16:27:59 UTC
From: enriqueeeeee2001@...
Topic: 10754 Message: 10763

Hello Andy,

I have realized, with a variable attenuator, that the 100M gives 13db more than necessary. Maybe a 1,5 x 1,5 loop will be fine.

I have not a near MW transmitter,,, much worse I have a variable frequency controller. Noises and carriers come from the VFC,lift, and the most affected bands are LW and MW but I did not expect to affect in this way.

Thank you for your help again.

Regards

10764. Broadband LW MW SW Passive Delta Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-13 21:24:57 UTC
From: lionelloarosio@...
Topic: 10764 Message: 10764

Ho Group, Looking for project about Broadband LW MW SW Passive Delta Loop Antenna. Medium aperture (3 x 5-7 meter each side) Broadband Matching Transformer Ratio ? Best Regards, Lio, IZ2BKO

10765. A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-17 13:45:50 UTC
From: pu3hag.l@gmail.com
Topic: 10765 Message: 10765

http://www.ebay.com/itm/Fractal-magnetic-loop-antenna-/251648020675

Interesting shape. I wonder how it compares with more traditional designs :)

-- pu3hag huelbe

10766. Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-17 17:50:57 UTC
From: gnuarm.2007@...
Topic: 10765 Message: 10766

I wonder what makes it a "fractal"? Certainly not the shape. There is nothing fractal about it.

10767. Re: [loopantennas] Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-17 19:11:33 UTC
From: Myamiphil
Topic: 10765 Message: 10767

I wonder if one consider an infinite number of iterations of fractilizations the sides would eventually approach the shape of a curve.. Interesting still what would happen if you took a straight long wire and shaped it sinusoidily would it be the same thing as that curvy loop?

Best Regards
Phil
WA2069SWL

Lat: 40.8367633 Long: -74.1768412

From: "gnuarm.2007@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Wednesday, September 17, 2014 1:50 PM
Subject: [loopantennas] Re: A fractal loop antenna at eBay

I wonder what makes it a "fractal"? Certainly not the shape. There is nothing fractal about it.

10768. Re: [loopantennas] Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-17 19:39:11 UTC
From: gnuarm.2007@...
Topic: 10765 Message: 10768

I'm not sure I understand. It is already a curve... Maybe this will give you an idea of what a Fractal is. A Fractal has similar features at different levels.

Koch snowflake - Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Koch_snowflake

http://en.wikipedia.org/wiki/Koch_snowflake

Koch snowflake - Wikipedia, the free encyclopedia
http://en.wikipedia.org/wiki/Koch_snowflake The Koch snowflake (also known as the Koch star and Koch island[1]) is a mathematical curve and one of the earliest fractal curves to have been des...

View on en.wikipedia.org http://en.wikipedia.org/wiki/Koch_snowflake
Preview by Yahoo

10769. Re: [loopantennas] Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-17 18:11:15 UTC
From: Bob C
Topic: 10765 Message: 10769

Having constructed resonant loop antennas for LW, MW and SW for many years, I have no knowledge of "fractal loops." A quick survey of the internet would suggest they add a third dimension, i.e., depth to a turn of the coil. Would this be a way of increasing effective height, while maintaining the same inductance (effective height being (2 x Pi x number of turns x area x cos angle) / wavelength)?

Bob in MD

10770. Re: [loopantennas] Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-18 04:11:31 UTC
From: Andy
Topic: 10765 Message: 10770

"Interesting still what would happen if you took a straight long wire and shaped it sinusoidily"

Hey, do you mean like a slinky antenna? Yeah, they work really well. Heh.

But I guess it's pretty much the same idea, sinusoidal in 3D. Fitting more conductor length into a shorter space.

The term "fractal antenna" has been rather misused over the last decade or so. Of course they can't be true fractals; the repeating shape has to stop repeating eventually. Some sooner than others.

Andy

10771. Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-18 10:35:25 UTC
From: pmooney22@...
Topic: 10765 Message: 10771

I note the description includes the name 'Steve Nichols RadCom'

Has this been reviewed in Radcom?

Paul, 5B8BA

10772. Re: [loopantennas] Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-18 14:13:31 UTC
From: Myamiphil
Topic: 10765 Message: 10772

Slinky came to my mind too....lol.... wondering now if you took it and mounted it on some sort of circular frame .....

Hmmmm new application for Slinkys..... loop antennas!

I have two in a straight line in my attic.. I need to check out the inductance....

Best Regards
Phil
WA2069SWL

Lat: 40.8367633 Long: -74.1768412

From: "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Thursday, September 18, 2014 12:11 AM
Subject: Re: [loopantennas] Re: A fractal loop antenna at eBay

"Interesting still what would happen if you took a straight long wire and shaped it sinusoidily"

Hey, do you mean like a slinky antenna? Yeah, they work really well. Heh.

But I guess it's pretty much the same idea, sinusoidal in 3D. Fitting more conductor length into a shorter space.

The term "fractal antenna" has been rather misused over the last decade or so. Of course they can't be true fractals; the repeating shape has to stop repeating eventually. Some sooner than others.

Andy

10773. Re: [loopantennas] Re: A fractal loop antenna at eBay

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-18 05:29:42 UTC
From: Robert Cavanaugh
Topic: 10765 Message: 10773

All,
I have been in contact w/ Steve Nichols who reviewed this antenna when

it was called the "Crazy Daisy". He sent me the review so I guess I can
share it w/ the group (Moderator, please chime in if I am in error):

73,
Bob Cavanaugh - AG6YK

Catch: crazydaisy

Steve Nichols

RadCom

1400 words + pix

The Crazy Daisy magnetic loop antenna

Victor Borisov, GM0SDV is very keen on developing new antenna designs.
In 2011 Peter Dodd G3LDO reviewed his figure of eight magnetic loop
antenna constructed from 22mm tube. This turned out to be quite a
performer, coming within a fraction of a dB of the performance of a half
wave dipole during WSPR tests. The original review and antenna is
available from www.mixw.co.uk

Victor has now switched his attention to smaller antennas and visitors
to the Newark Hamfest in September may have seen his “Crazy Daisy”
magnetic loop antenna for HF on the RigExpert stand.

I asked Victor if I could take it away to test for RadCom and he was
more than happy for me to do so.

The Crazy Daisy has a unique petal-pattern main loop formed from
aluminium flat bar 3 mm thick, 36 mm wide. The overall diameter is about
87cm and it has eight zig-zag spokes or petals. It looks a little like a
child's “Crazy Daisy” toy that you connect a garden hose to, hence the name.

The loop is brought to resonance with a “butterfly” split stator
variable capacitor at the top which is in a weather-sealed enclosure.
The capacitor is connected to the loop via bolts secured by wing nuts.

The capacitor is turned by a small DC motor and reduction gear and
controlled by a small lightweight controller that is fed via a plug-in
12 V power supply, similar to a mobile phone charger. The box has a
“fast” and “slow” switch, which reduces the voltage to the motor and a
rocker switch for moving up and down the band.

There is no “up” or “down” button as such as the capacitor can rotate more than 360 degrees. This means that going “up” in frequency would depend upon where the capacitor position was to start with.

Tuning is done by listening for increased band noise as the capacitor is turned and then fine tuning to give the lowest SWR. The antenna is fed with a single-turn Faraday loop to which your coax is connected.

Victor says that the antenna can take up 400W although in testing I limited this to 100W.

The whole antenna is about three feet wide, relatively light and fits on a single pole, which I supported in the ground using a screw-in support obtained from Clas Ohlson.

The theory of how a magnetic loop works is quite well documented and I have used two different commercial varieties (MFJ and Capco/AAA) on and off for years so know pretty much what to expect.

When mounted vertically they offer a fan-shaped radiation pattern in a line with the loop with nulls off the side. At the horizon the radiation is vertically polarised, although overhead it is largely horizontal – just think about what you see when you look down on a magnetic loop and you can see why.

If built properly a magnetic, or more correctly small tuned loop (STL), can be very efficient, approaching dipole-like performance on 28 MHz (10m) and a few dB down on the lower HF bands. I say “built properly” as you have to ensure that losses are kept to a minimum by using good quality components with very low loss connections, such as welded or brazed. A few milli-Ohms of loss can drastically affect the performance of a loop and many proponents of the loop art advocate using vacuum variable or split stator capacitors to reduce losses.

And if you think that everything is known about the STL and its performance think again. Rich Fusinski K8NDS is currently experimenting with helically-loaded magnetic loops that use copper flashing rather than tubing. When fitted with a vacuum variable capacitor and fed with a gamma match he is getting good reports and can even run 1kW into them without problems.

There is a debate about whether K8NDS's antenna is more efficient than a conventional loop made out of copper tubing, but it is good to see experimentation going on.

Anyway, back to the “Crazy Daisy”, on test it was found to tune from 12.4 MHz to 29.5 MHz. The positioning of the Faraday loop was found to be critical, but I was able to get the SWR down to around 1:1.2 or less on some frequencies and less than 1.8:1 across the whole frequency range.

As you would expect the bandwidth once tuned was narrow – about 50 kHz between 3:1 SWR points on 20m (14 MHz), 84 kHz on 15m (21 MHz) and 125 kHz on 10m (28 MHz).

On receive the first thing that struck me was just how quiet the antenna is. Band noise was minimal, which meant that weak signals were received loud and clear. Tuning around it was clear that the loop was receiving just about everything my main antennas could hear. Usually signals were down a little when compared with my dipoles, but the lower noise floor meant that the overall signal to noise ratio was about the same.

This suggests that the antenna would be an excellent choice for a short wave listener who doesn't have the space for a full-size antenna. One antenna could be used to cover everything from 12.4 to 29.5 MHz, including amateur, shortwave broadcast, aeronautical and anything else in the spectrum. If you live in a flat with no access to a garden the “Crazy Daisy” could be located on a balcony and enable you to play radio.

So how well does the “Crazy Daisy” work? I decided to test the antenna using WSPR (Weak Signal Propagation Reporter). I used 5W and transmitted for two, two-minute periods with the loop (tuned to the appropriate WSPR frequency). I then switched antennas and transmitted again.

By going to _www.wsprnet.org <http://www.wsprnet.org/>_ I was then able to see where my signals had been received and what signal strength. I then took only the reports where the signals had been received from both antennas and calculated a mean (average) signal strength.

The results showed that on 20m (14 MHz) the Crazy Daisy mounted with the base just four feet off the ground was down about 9.4-9.7dB on a half wave dipole mounted at 25 feet.

To give the full picture, signals from the dipole were received by more reporting stations than the “Crazy Daisy”, which is to be expected given the performance outlined above.

Similar results were obtained on 18 MHz (17m) and 21 MHz (15m), were conditions were not too good at the time of the tests.

On 10m the antenna performed slightly better (as you would expect, where its physical size is less small compared with the wavelength in use). Here it was around 6dB down on a 28 MHz dipole at 25 feet.

The different radiation patterns and vagaries of the ionosphere meant that some signals were similar in strength and some were worse.

This led me to believe that for optimum efficiency it would make sense to mount the “Crazy Daisy” on a rotator so that you can align it with the area of the world you wish to work.

Once the tests were over it was time to think about the results and why the antenna performs the way it does. Current wisdom is that one of the critical factors of a magnetic loop antenna is the area enclosed by the loop. For example, for a circular loop of radius 40 cm the enclosed area is Pi x radius squared = 0.5m^2 .

Now, although the overall width of the “Crazy Daisy” is about 87cm, its design means that it covers roughly the same area as a circle of

approximate radius 0.3m, giving a total enclosed area of about 0.28m^2 .

Feeding these figures into the late Reg Edwards G4FGQ's loop calculating program (RJELoop1.exe) suggests that its performance might be about 3dB down on a circular loop of about 80cm diameter.

Either way, I think Victor GM0SDV should be congratulated on experimenting with different loop designs and the antenna enables a ham with little space to get on the air. The fact that the loop received and transmitted signals to the USA, Canada, Israel and Reunion Island and took about 30 minutes to erect says it all.

Victor says that he builds the antennas for fun and ploughs the money that he makes from selling them back into research and design – he is currently interested in fractal antennas, which he feels could offer a lot of performance for their size.

The Crazy Daisy is available from KMK UK Limited (e-mail: mixw@...

or web: _www.mixw.co.uk <http://www.mixw.co.uk/>_) for £200 + P&P. Our thanks to Victor for lending the antenna to us for review.

ENDS

10774. Drake AL-4 Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-26 23:50:58 UTC
From: hmholden69@...
Topic: 10774 Message: 10774

I want to build this antenna, Looks like it is made of RG-174 coax. Does anyone have a schematic that shows how the coax is wired to the male jack that plugs into the radio?

10775. Re: [loopantennas] Drake AL-4 Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-27 00:06:00 UTC
From: Robert Cavanaugh
Topic: 10774 Message: 10775

Did you check this out?
http://boxspringsonline.com/drake/1231-drake-al4-loop-antenna-manual

73,
Bob Cavanaugh - AG6YK

On Friday, September 26, 2014 4:51 PM, "hmholden69@... [loopantennas]"
<loopantennas@yahoogroups.com> wrote:

I want to build this antenna, Looks like it is made of RG-174 coax. Does anyone have a schematic that shows how the coax is wired to the male jack that plugs into the radio?

10776. Re: [loopantennas] Drake AL-4 Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-27 00:49:59 UTC
From: Don
Topic: 10774 Message: 10776
Attachments: 1 described; binary payloads are missing from this source WARC

Hi,

Appearantly there is a space in the shield like most loop antennas at the top. I've seen two AL-4 photo's but not an actual one yet and there is a light colored section, probably plastic tubing, in the center of the top section. A 0.25 to 0.5in space should be enough. Looks like the coax is just threaded through holes/loops on the ends of the arms/spokes of the antenna.

I'll attach a photo of one but the group probably does not allow photo's. In case of that I will also send the photo direct to you.

The radio side shows the tip of the plug is the "hot" side and the ring is the ground. Since there are only two connections and no " live" voltages/current, I would not think it would matter which is which. Of course you would want to "jump" the ends of the coax shield at the bottom.

According to the manual the antenna was only good for 150-1600 kHz.

Good DX!

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
FRG-100B ICF2010 Perseus x3
R70 R71A w/250Hz R75 x2 w/250Hz
SDR-IQ SPR-4 SSR-1
SR-AF & LPF DSP599zx MFJ-784B
HD-1418 AF-1 MSB-1
PA0RDT Mini-Whipx2 @ 25ft
RYO Active Antenna @ 25ft
ALA100Lx2 Z1501F @20ft w/9ft Whip
Solarcon A-99

On 26-Sep-14 16:50, hmholden69@... [loopantennas] wrote:
>
>
> I want to build this antenna, Looks like it is made of RG-174 coax. Does
> anyone have a schematic that shows how the coax is wired to the male
> jack that plugs into the radio?
>
>
>
>
>

10777. Re: [loopantennas] Drake AL-4 Loop Antenna [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-27 01:17:05 UTC
From: Myamiphil
Topic: 10774 Message: 10777
Attachments: 3 described; binary payloads are missing from this source WARC

Google yielded a few more. Can't quite make out the cable type but definitely a coax. get a good idea of the size too. no cap tuner unleass its inside the Drake rcvr.
  Best Regards Phil
WA2069SWL
Lat: 40.8367633 Long: -74.1768412

From: "Don stb55@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com; hmholden69@...
Sent: Friday, September 26, 2014 8:49 PM
Subject: Re: [loopantennas] Drake AL-4 Loop Antenna [1 Attachment]

Hi,

Appearantly there is a space in the shield like most loop antennas at the top. I've seen two AL-4 photo's but not an actual one yet and there is a light colored section, probably plastic tubing, in the center of the top section. A 0.25 to 0.5in space should be enough. Looks like the coax is just threaded through holes/loops on the ends of the arms/spokes of the antenna.

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The radio side shows the tip of the plug is the "hot" side and the ring is the ground. Since there are only two connections and no " live" voltages/current, I would not think it would matter which is which. Of course you would want to "jump" the ends of the coax shield at the bottom.

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If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

And please trim all this when replying!

Yahoo Groups Links

10778. Re: [loopantennas] Drake AL-4 Loop Antenna [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-27 04:36:30 UTC
From: hmholden69@...
Topic: 10774 Message: 10778

The light color space at the top of the loop probably means its a break in the shield . I know that on the SPR4 and probably the SW4 that the loop goes to a jack that connects to a loop amplifier. Its Q1 on the SPR4. So it looks like they used a piece of RG-174 to build a shielded loop. Wish I had a schematic to look at to see if they were making a Faraday type config.

10779. Re: [loopantennas] Drake AL-4 Loop Antenna [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-27 07:58:28 UTC
From: deju5us@...
Topic: 10774 Message: 10779

Hello all,

I have had one but it was sold wth the reciever some years ago. The coax was about RG174 size, there was no tuning cap of any sort - it was broadband - and only worked in the mw range of the reciever. I remember from the circuit diagramme I had that it fed into a grounded base amplifier using a single transistor.

Cannot say if there was a break in the coax shield making it a shielded loop or whether inner and outer were tied together just basically making a single conductor loop. Performance-wise it worked OK given it was used indoors.

Sorry but that is all the info I can recall.

Regards, John

10780. Re: [loopantennas] Drake AL-4 Loop Antenna [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-09-27 15:05:04 UTC
From: JRTOW3RD@...
Topic: 10774 Message: 10780

I, too, had the SPR-4/AL-4 combo... and my name is John as well! I sold it probably twenty-five plus years ago. I recall it being unbalanced - and not much for symmetrical nulls. Additionally, it's 1/4" phone plug end fitted through a hole, revealed by removing a cover/plug in the top, down into the chassis top mounted phone jack. It was grounded by the ring/sleeve, making it noisy to bump, much less to rotate. With the SPR-4's 'slow' stock AGC, that was aggravating. While I logged many LW aero beacons on my LW, that AL-4 was of little use at my receiving station's location - below grade and under fluorescent lights (I never found the NB-5 noise blanker for the SPR-4.

I always wanted to try my four foot box loop plugged into the SPR-4's common base loop amp - but never did, other than via the antenna input, which I always wanted to change from the dinky RCA phono jack to a BNC. I still miss the SPR-4, it's aggravating quirks having been lost in my memory some time back. I still check evil-bay for a 'good' one...

If you make a 'similar' loop of RG-174, don't terminate it in a phone plug. Use something better for a bearing - on a large base - with 180 degree rotation limits and provide a decent connector (BNC), too.... essentially, hard-wiring the lead-in.

John

10781. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-01 13:30:11 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10781

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
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> * * * Home made 'Box' AM Loop Antennas
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>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10782. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-01 13:30:11 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10782

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10783. AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-03 16:02:47 UTC
From: stephen_qrp@...
Topic: 10783 Message: 10783

Hi

Does anybody have any knowledge of this antenna.

http://www.aorusa.com/antennas/la800.html http://www.aorusa.com/antennas/la800.html

I wonder how it "tunes "
It's expensive.

Regards to all

Stephen

10784. Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-03 16:24:47 UTC
From: gnuarm.2007@...
Topic: 10783 Message: 10784

They say it is tuned by relays. I expect they are selecting a capacitor using relays for the band and then use a varactor to tune the frequency.

10785. Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-04 08:22:53 UTC
From: stephen_qrp@...
Topic: 10783 Message: 10785

Interesting

As I understand it, the loop is not tuned in the convention sense by varying the electrical length
but by the use of filters.

This is still going to give a wide recieve spectrum, by no means a high Q

Regards

Stephen

10786. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-04 17:07:26 UTC
From: pu3hag.l@gmail.com
Topic: 10783 Message: 10786

Hello,

there's a MT article on it here:
http://www.monitoringtimes.com/0613firstlookaorla400.pdf

I found odd the term "aligned/unaligned" range. I wonder if it means if it refers to the radiation pattern (where the antenna shows deep nulls) or the tuning range.

My guess: unaligned range means the antenna element (alu loop) is only connected to the preamp terminals. Aligned range uses a switched inductors plus a varactor for tuning.

-- pu3hag huelbe

On Oct 4, 2014, at 5:22 AM, "stephen_qrp@... [loopantennas]"
<loopantennas@yahoogroups.com> wrote:

Interesting

As I understand it, the loop is not tuned in the convention sense by varying the electrical length
but by the use of filters.

This is still going to give a wide recieve spectrum, by no means a high Q

Regards

Stephen

10787. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-05 07:43:09 UTC
From: stephen_qrp@...
Topic: 10783 Message: 10787

Hello

An interesting article.

I am intrigued by the words " Tuning is razor sharp, requiring a delicate touch for exact setting. "
as this implies a very narrow bandwidth.

Regards

Stephen

10788. AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-05 07:46:56 UTC
From: Hue Miller
Topic: 10783 Message: 10788

Loop Antenna News and Information ForumThat’s my understanding: the “unaligned range” is outside the manual tuning range
of the antenna, but where it still offers useful sensitivity.
When I read posts here about its “high price”, I expected a price in the 4 digits.
(Well, as I write this, I realize that with the impedance transformer and coax isolater add-ons, the price will get into 4 digits....) But it occurred to me that many, if not most people looking at such antennas already have that much or more invested in their receiving equipment.
-Hue Miller (Newport, Oregon, USA)

10789. Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-05 15:23:12 UTC
From: stephen_qrp@...
Topic: 10783 Message: 10789

Hello Hue

It's $1200 + in the UK

Stephen

10790. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-05 15:52:45 UTC
From: Geraldo Pietragala
Topic: 10783 Message: 10790

AOR LA800 受信専用屋外用シールドループアンテナ10k-500MHzカバー大口径80cm
by AOR 1 customer review

￥ 55,337 Amazon Co. Jp

http://www.cqcqde.com/shop/23_17739.html

AR-077
商品名 LA800 （ LA-800 ） 受信専用屋外用シールドループアンテナ10k-500MHzカバー【送料無料】
税込定価 (8%) 61,560円
税込売価 (8%) 55,404円

http://item.rakuten.co.jp/kotobukicqshop/aor-la800/

商品番号 aor-la800
価格 55,337円 (税込) 送料込
Sds
Geraldo

Em Segunda-feira, 6 de Outubro de 2014 0:23, "stephen_qrp@... [loopantennas]" <loopantennas@yahoogroups.com> escreveu:

Hello Hue

It's $1200 + in the UK

Stephen

10791. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-05 22:58:43 UTC
From: pu3hag.l@gmail.com
Topic: 10783 Message: 10791

Geraldo,

is my math correct? 55,000 Japan Yen is about USDollars 500?

-- pu3hag huelbe

On Oct 5, 2014, at 12:52 PM, "Geraldo Pietragala gera5006@yahoo.com.br [loopantennas]" <loopantennas@yahoogroups.com> wrote:

AOR LA800 受信専用屋外用シールドループアンテナ10k-500MHzカバー大口径80cm

by AOR
1 customer review

￥ 55,337 Amazon Co. Jp

http://www.cqcqde.com/shop/23_17739.html

AR-077
商品名 LA800 （ LA-800 ） 受信専用屋外用シールドループアンテナ10k-500MHzカバー【送料無料】
税込定価 (8%) 61,560円
税込売価 (8%) 55,404円

http://item.rakuten.co.jp/kotobukicqshop/aor-la800/

商品番号 aor-la800
価格 55,337円 (税込) 送料込
Sds
Geraldo

Em Segunda-feira, 6 de Outubro de 2014 0:23, "stephen_qrp@... [loopantennas]" <loopantennas@yahoogroups.com> escreveu:

Hello Hue

It's $1200 + in the UK

Stephen

10792. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-05 23:20:22 UTC
From: Fred
Topic: 10783 Message: 10792

Yes you are correct. @ $500
Fred N4CLA

On 10/5/2014 6:58 PM, 'pu3hag.l@...' pu3hag.l@... [loopantennas] wrote:

Geraldo,

is my math correct? 55,000 Japan Yen is about USDollars 500?

-- pu3hag huelbe

On Oct 5, 2014, at 12:52 PM, "Geraldo Pietragala gera5006@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

AOR LA800 受信専用屋外用シールドループアンテナ10k-500MHzカバー大口径80cm

by AOR (http://www.amazon.co.jp/s/ref=bl_sr_electronics?ie=UTF8&field-brandtextbin=AOR&node=3210981)

1 customer review (http://www.amazon.co.jp/AOR-LA-800-LA800-%E5%8F%97%E4%BF%A1%E5%B0%82%E7%94%A8%E5%B1%8B%E5%A4%96%E7%94%A8%E3%82%B7%E3%83%BC%E3%83%AB%E3%83%89%E3%83%AB%E3%83%BC%E3%83%97%E3%82%A2%E3%83%B3%E3%83%86%E3%83%8A10k-500MHz%E3%82%AB%E3%83%90%E3%83%BC%E5%A4%A7%E5%8F%A3%E5%BE%8480cm/dp/B00AU9P8JY#customerReviews)

￥ 55,337 Amazon Co. Jp

http://www.cqcqde.com/shop/23_17739.html

AR-077

商品名

LA800 （ LA-800 ） 受信専用屋外用シールドループアンテナ10k-500MHzカバー【送料無料】

税込定価 (8%)

61,560円

税込売価 (8%)

55,404 円

http://item.rakuten.co.jp/kotobukicqshop/aor-la800/

商品番号

aor-la800

価格

55,337円 (税込) 送料込
Sds
Geraldo

Em Segunda-feira, 6 de Outubro de 2014 0:23, "stephen_qrp@... [loopantennas]" <loopantennas@yahoogroups.com> escreveu:

Hello Hue

It's $1200 + in the UK

Stephen

10793. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-06 15:42:23 UTC
From: Geraldo Pietragala
Topic: 10783 Message: 10793

yes,sim

Em Segunda-feira, 6 de Outubro de 2014 7:58, "'pu3hag.l@gmail.com' pu3hag.l@... [loopantennas]" <loopantennas@yahoogroups.com> escreveu:

Geraldo,

is my math correct? 55,000 Japan Yen is about USDollars 500?

-- pu3hag huelbe

On Oct 5, 2014, at 12:52 PM, "Geraldo Pietragala gera5006@... [loopantennas]" <loopantennas@...m> wrote:

AOR LA800 受信専用屋外用シールドループアンテナ10k-500MHzカバー大口径80cm
by AOR
1 customer review

￥ 55,337 Amazon Co. Jp

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AR-077
商品名 LA800 （ LA-800 ） 受信専用屋外用シールドループアンテナ10k-500MHzカバー【送料無料】
税込定価 (8%) 61,560円
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http://item.rakuten.co.jp/kotobukicqshop/aor-la800/

商品番号 aor-la800
価格 55,337円 (税込) 送料込
Sds
Geraldo

Em Segunda-feira, 6 de Outubro de 2014 0:23, "stephen_qrp@... [loopantennas]" <loopantennas@yahoogroups.com> escreveu:

Hello Hue

It's $1200 + in the UK

Stephen

10794. How to connect balanced feedline to unbalanced input on rx

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-10 17:04:23 UTC
From: hmholden69@...
Topic: 10794 Message: 10794

I have a 3 Ft. tuned box loop for the MW band that I want to connect to my FRG7 which has unbalanced inputs. How do I connect my balanced feedline to the radio. I'm using AC linecord for the feeder line, which I've read is about 75 Ohms.

10795. Re: [loopantennas] How to connect balanced feedline to unbalanced input on rx

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-10 17:09:57 UTC
From: T. Hills
Topic: 10794 Message: 10795

If your box loop is set up for 75Ohms then soldering one side of the feedline to the center conductor of a PL-239 and the other to the shell should be close enough for Gummint work. With 3' of feeder any mismatch is going to be negligible.

I use a remote tuned loop with an RG6 (75Ohm) feeder about 45' long connected to a PL-239 into my R-71A and it works just fine.

Tim Hills
Sioux Falls, SD

On 10/10/2014 12:04 PM, hmholden69@... [loopantennas] wrote:
>
> I have a 3 Ft. tuned box loop for the MW band that I want to connect
> to my FRG7 which has unbalanced inputs. How do I connect my balanced
> feedline to the radio. I'm using AC linecord for the feeder line,
> which I've read is about 75 Ohms.
>
>
>
> ---
>

10796. Re: [loopantennas] How to connect balanced feedline to unbalanced input on rx

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-10 18:23:37 UTC
From: Robert Cavanaugh
Topic: 10794 Message: 10796

Hi,
Is this for transmitting or receiving? Matching is much more important when you are transmitting. A mismatch between 50 ohms to 75 ohms is only 1.5:1. I would accept that even if I was transmitting a high power signal. If you are just receiving the difference in received power should not even be detectable. I second the opinion to ignore it. I would recommend that you cobble up some sort of connector to match your SO-239. I would suggest attaching something simple to the feedline such as an RCA phono plug and use a conversion jack to attach it to your radio connector. Just make sure that however you attach it you provide sufficient strain relief on the feedline and you should be good to go.

73,
Bob Cavanaugh - AG6YK

On Friday, October 10, 2014 10:09 AM, "'T. Hills' thills@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

If your box loop is set up for 75Ohms then soldering one side of the feedline to the center conductor of a PL-239 and the other to the shell should be close enough for Gummint work. With 3' of feeder any mismatch is going to be negligible.

I use a remote tuned loop with an RG6 (75Ohm) feeder about 45' long
connected to a PL-239 into my R-71A and it works just fine.

Tim Hills
Sioux Falls, SD

On 10/10/2014 12:04 PM, hmholden69@... [loopantennas] wrote:

>I have a 3 Ft. tuned box loop for the MW band that I want to connect to my FRG7 which has unbalanced inputs. How do I connect my balanced feedline to the radio. I'm using AC linecord for the feeder line, which I've read is about 75 Ohms.
>
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10797. RE: [loopantennas] How to connect balanced feedline to unbalanced input on rx

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-10 19:15:05 UTC
From: dx11
Topic: 10794 Message: 10797

How the feed line is connected to the FRG7 is the minor problem, the main question in this case is how the feed line is connected to the tuned loop.

The feed line impedance of 75 Ohms needs to be connected to a loop impedance with about the same value. How is that achieved?

Has it got a Faraday loop, a Gamma match or something else?

Please elaborate on that, than we can give you an answer that will help you.

Cor Beijersbergen PA4Q

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: vrijdag 10 oktober 2014 19:04
To: loopantennas@yahoogroups.com
Subject: [loopantennas] How to connect balanced feedline to unbalanced input on rx

I have a 3 Ft. tuned box loop for the MW band that I want to connect to my FRG7 which has unbalanced inputs. How do I connect my balanced feedline to the radio. I'm using AC linecord for the feeder line, which I've read is about 75 Ohms.

10798. Re: How to connect balanced feedline to unbalanced input on rx

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-11 13:32:16 UTC
From: JRTOW3RD@...
Topic: 10794 Message: 10798

If your 3ft tuned loop has a separate winding for the balanced pickup and that is connected to the Zip cord, simply connect one of them to the inner red 'BC' connector and the other to the adjacent black 'E'. Also, a proper ground, or 'Earth' connection, should be made to the radio. A dedicated ground rod is sufficient. I found the back panel pictured in Universal Radio's discontinued listing for the FRG-7 and it's schematic elsewhere on the web. Interestingly, the red 'BC' connector goes via a separate selected attenuator resistor pad directly to the MW preselector coil, while the other red connector and the parallel connected SO-239 jack (PL-259 receptacle) are only used on SW. A short jumper run between the two red connectors will allow the SO-239 jack to be used on MW, if you want. The detrimental effect of unbalancing the balanced feed may present as a decrease in the null symmetry on local groundwave signals - hardly a bother! BTW, there is a 22pF cap between the two red terminals internally - presumably to offer a 'Hi Z' antenna input (Universal said 500/50 Ohms for input Z). If you were to plug the loop into the SO-239 without the aforementioned jumper it would be like placing a 7 kilOhm resistance in series. I'd connect the Zip wire antenna between the 'BC' and 'E' connectors.

If your tuned box loop doesn't pick up much signal AND the tuning capacitor seems ineffectual, your Zip cord is likely connected across the parallel connected coil and tuning capacitor - and that is wrong! Wind a single turn pickup loop just inside the other loop and connect it to the Zip cord to the receiver.

Years ago, in my more active days, I went through a myriad of receivers - including an FRG-7 - I still have fond memories of using it!

John

10799. Re: How to connect balanced feedline to unbalanced input on rx

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-11 18:46:39 UTC
From: gnuarm.2007@...
Topic: 10794 Message: 10799

I am curious about the purpose of a ground when using a loop antenna. I know a ground is important when using a long wire as the ground is part of the antenna. But a loop doesn't require a ground connection to function properly does it?

Heck, I've always heard that ground loops are not good... ;)

Rick

10800. Loop Antennas for Sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-12 14:26:26 UTC
From: everettsharp@...
Topic: 10800 Message: 10800
Attachments: 1 described; binary payloads are missing from this source WARC

If anyone is looking for a very nice air tuned loop antenna I will be attending the Stone Mountain Hamfest North of Atlanta, GA on November 1 and will only be there on Saterday. I can be found in the Boneyard flea market area. http://www.stonemountainhamfest.com/

Pictured below are some of the loops that will be for sale. I have sold all of my FSL antennas, but may build some later to use up all of my ferrite bars and variable capacitors.

Everett N8CNP

10801. Re: [loopantennas] Re: How to connect balanced feedline to unbalanced input on rx

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-14 02:26:37 UTC
From: Andy
Topic: 10794 Message: 10801

If the antenna is balanced and you want to maintain that balance (which can be important for a loop antenna), then the best or "right" way to connect it to an unbalanced receiver input is with a balun. It is essentially a transformer, or functions similarly to one. Some baluns also transform the impedance, but not necessarily. There are many plans online for building many kinds of baluns.

Regarding grounds, I am of the opinion that they generally are not needed (except for safety) and often are better off avoided. However, for a receive-only situation, it can be helpful to have a ground available, and try it, just to see if reception is better with it or without it. For a loop antenna, grounding it (making the loop unbalanced) might increase the received signal strength because now the feedline and the ground wire become part of the antenna, not just the loop itself. That can be good and bad. It tends to destroy the loop antenna's nice figure-8 pattern with deep nulls, and make the antenna more responsive to electrical noise that it would have rejected if it was nicely balanced. But try it both ways.

Ground loops can be bad, but not always. Often they are unavoidable, especially at RF.

Andy

10802. FS: Jennings Variable Vacuum Capacitor

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-10-13 23:04:49 UTC
From: topossibilities@...
Topic: 10802 Message: 10802
Attachments: 1 described; binary payloads are missing from this source WARC

Surplus to my needs, have a 3-30pF, 15/9 kVp Jennings variable tuning vacuum capacitor (P/N CADD-30-0515). Has 1/4" shaft, with end to turns of 15. Picture attached.

Before posting to other sites (e.g. desirable for high power amplifiers), offering here first for transmitting use in a small loop antenna (e.g. given typical dimensions capable of tuning a 20 - 30 Mhz small transmitting loop.

Asking $60 + shipping

Also have a couple of 215pF air variable transmitting capacitors @ 4500 volts for $30 each, plus shipping.

Please reply off list to topossibilities'at'yahoo.com

Ed

10803. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-01 14:02:50 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10803

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10804. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-01 14:02:50 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10804

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10805. For Sale Ferrite Tuned Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-02 16:32:31 UTC
From: everettsharp@...
Topic: 10805 Message: 10805

If anyone is interested I have for sale a 15" long tuned loop stick antenna made up using 30 FT140-61 toroids with one of the, very high Q, 2 gang Russian variable capacitors. It is wound with 4 coils in the Pollydoroff configuration. Works very well and I am asking $150 plus $15 shipping. There is a article posted on this site that covers the process and construction of this tuned loop. However, if interested and you can't find the article please contact me off list and I will send you a pdf copy. Contact me at everettsharp (at) aol.

Everett N8CNP

10806. Wanted: Palomar Engineers longwave LF 150 - 550 Khz loop element

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-02 00:05:16 UTC
From: nc9k@...
Topic: 10806 Message: 10806

I am looking for a Palomar Engineers longwave LF 150 - 550 Khz loop element to either outright purchase or swap my extra Palomar Engineers WWVB 40 - 150 Khz loop element for. Thanks nc9K(at)hotmail.com

10807. Re: [loopantennas] For Sale Ferrite Tuned Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-02 21:55:12 UTC
From: David Bell
Topic: 10805 Message: 10807

Sent from my iPad

> On Nov 2, 2014, at 8:32 AM, everettsharp@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> If anyone is interested I have for sale a 15" long tuned loop stick antenna made up using 30 FT140-61 toroids with one of the, very high Q, 2 gang Russian variable capacitors. It is wound with 4 coils in the Pollydoroff configuration. Works very well and I am asking $150 plus $15 shipping. There is a article posted on this site that covers the process and construction of this tuned loop. However, if interested and you can't find the article please contact me off list and I will send you a pdf copy. Contact me at everettsharp (at) aol.
>
> Everett N8CNP
>
>
>

10808. diversity reception with 2 small loop antennas, Linrad & 2 channel Afedri SDR

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-08 12:13:12 UTC
From: sp2bpd@...
Topic: 10808 Message: 10808

A film on diversity reception (adaptive beamforming) on 2 Wellbrook loops, 2 channel Afedri SDR and Linrad software was uploaded here:

http://youtu.be/sFpSQQ_dBE4 http://youtu.be/sFpSQQ_dBE4

Kind regards

Piotr, SP2BPD

10810. Re: [loopantennas] small loops phasing with 2 channel Afedri SDR and Linrad adaptive beamforming

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-08 22:04:49 UTC
From: Andrew Ikin
Topic: 10809 Message: 10810

Hello Piotr,

Thanks for the interesting demonstration.

What size loops were you using with the ALA100LNs? Also what was the antenna separation and orientation?
I assume that the adaptive polarisation is a cleaver way of optimising the phase difference between the two channel SDR? “most impressive”

73

Andrew Ikin

www.loop-antennas.com

From: mailto:loopantennas@yahoogroups.com
Sent: Saturday, November 08, 2014 3:07 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] small loops phasing with 2 channel Afedri SDR and Linrad adaptive beamforming

A film on phasing two loops with a combo: 2 channel Afedri SDR + Linrad software was uploaded to youtube:

http://youtu.be/sFpSQQ_dBE4

Piotr, SP2BPD

10811. Re: [loopantennas] small loops phasing with 2 channel Afedri SDR and Linrad adaptive beamforming

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-09 08:19:47 UTC
From: sp2bpd@...
Topic: 10809 Message: 10811

Andrew,

the circumference of the loops is aprroximately 12 meters. Distance between them about 9 meters.
The setup is neither broadside nor endfire, just a random temporary location close to a building.

The pattern is completely unpredictable because of proximity o metal objects. But the smart software did it job and found a null to cancel the noise.

Regards

Piotr, SP2BPD

10812. RE: [loopantennas] small loops phasing with 2 channel Afedri SDR and Linrad adaptive beamforming

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-10 00:51:31 UTC
From: Silverfox
Topic: 10809 Message: 10812

If that is small, I wonder what large is?

73,

Alan - W6ARH

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Sunday, November 9, 2014 12:20 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] small loops phasing with 2 channel Afedri SDR and Linrad adaptive beamforming

Andrew,

the circumference of the loops is aprroximately 12 meters. Distance between them about 9 meters.

The setup is neither broadside nor endfire, just a random temporary location close to a building.

The pattern is completely unpredictable because of proximity o metal objects. But the smart software did it job and found a null to cancel the noise.

Regards

Piotr, SP2BPD

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2015.0.5315 / Virus Database: 4189/8533 - Release Date: 11/08/14

10813. Re: [loopantennas] small loops phasing with 2 channel Afedri SDR and Linrad adaptive beamforming

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-10 10:12:00 UTC
From: Steve Frost
Topic: 10809 Message: 10813

Alan...It is called a small loop because its size is small relative to one wavelength on the frequency of operation.

Regards.Steve VE9SF

On 11/9/2014 8:51 PM, 'Silverfox' alan.r.hill@... [loopantennas] wrote:
> If that is small, I wonder what large is?
>
> 73,
>
> Alan - W6ARH
>
>
>
>
>
> From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
> Sent: Sunday, November 9, 2014 12:20 AM
> To: loopantennas@yahoogroups.com
> Subject: Re: [loopantennas] small loops phasing with 2 channel Afedri SDR and Linrad adaptive beamforming
>
>
>
>
>
> Andrew,
>
>
>
> the circumference of the loops is aprroximately 12 meters. Distance between them about 9 meters.
>
> The setup is neither broadside nor endfire, just a random temporary location close to a building.
>
>
>
> The pattern is completely unpredictable because of proximity o metal objects. But the smart software did it job and found a null to cancel the noise.
>
>
>

> Regards
>
>
>
> Piotr, SP2BPD
>
>
>
> -----
>
> No virus found in this message.
> Checked by AVG - www.avg.com
> Version: 2015.0.5315 / Virus Database: 4189/8533 - Release Date: 11/08/14
>
>

10814. Re: Foxhole set and such....

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-14 22:38:26 UTC
From: bcarusella@...
Topic: 4597 Message: 10814

I know it's a 7 year old post but just in case mhatlau is still on the list... and if one of you knows how to contact him please forward this to him - thanks.
I am writing a book about improvised radios built by servicemen in the field, mostly during WWII but also before and after. The stories of the soldiers, sailors and marines and their experiences are all tied to the thread of the “foxhole” radios they built. I’ve interviewed many veterans and their families and am past the research stage but I still occasionally check old sources in case I missed anything. I was very happy to stumble on an old news group post of yours that mentions a foxhole radio constructed by your uncle. It’s one of the few I’ve run across built in the Pacific (most were built in Italy) so naturally I’d love to hear more of the story. Do you happen to have a picture of it? Not many exist of the original sets, and I only know of one – possibly two – that were brought back. - brian bcarusella at gmail dot com

10815. Re: Drake AL-4 Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-13 11:43:01 UTC
From: rivoltaperenne@...
Topic: 10774 Message: 10815

Sometime AL4 was used like coupled coil for a large loop antenna.You could change time costant of SPR4 AGC changing value of condenser as stated in manual. I have 2 SPR4 and are my funniest radios; better than my "serious" Collins and EKD's.

Ciao

10816. Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-18 06:25:42 UTC
From: stephen_qrp@...
Topic: 10783 Message: 10816

Hello

For those who may be interested, I have now had the chance to try this aerial.

The good news is that it is well made, the bad news is that is dreadful.
I compared it against the 7 other loop antennas I have, of which 4 are commercial, and it was the worst of the lot by a long long way.

I cannot understand AOR producing this expensive and very poorly performing antenna, perhaps I had a duff unit.

The Wellbrook or Pixel are much better at 1/3rd the cost of the AOR (UK prices)

I cannot think why anybody would want to buy the AOR, but be aware that the control cable is only 33ft in length, this means it is unlikely you would be able to mount the aerial far enough away from the electrical field of noise created by your house / shack.

In my case I have to mount all loops a minimum of 50ft from the house which meant for my tests I had to shutdown 90% + of the house electrics to create a similar environment.

This post is for general information only, AOR have done good things over the years but this aerial is not one of them.

Regards to all

Stephen

10817. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-18 10:02:41 UTC
From: Andrew Ikin
Topic: 10783 Message: 10817

Stephen,

Can you expand on what is wrong with the AOR loop i.e is it low sensitivity, poor local noise rejection or high IMD.
Or is it pain to keep tuning it!!

73

Andrew Ikin

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, November 18, 2014 6:25 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: AOR LA800

Hello

For those who may be interested, I have now had the chance to try this aerial.

The good news is that it is well made, the bad news is that is dreadful.
I compared it against the 7 other loop antennas I have, of which 4 are commercial, and it was the worst of the lot by a long long way.

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This post is for general information only, AOR have done good things over the years but this aerial is not one of them.

Regards to all

Stephen

10818. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-18 12:25:28 UTC
From: stephen_qrp@...
Topic: 10783 Message: 10818

Hello Andrew

When I first installed the AOR the noise floor was very high around -40 dBM, I put this down to the fact I had the aerial mounted close to the house because of the "short" control cable. When I shut down most of the house electrics the noise dropped to around -83 dBM. My standard 1530 loop mounted 55 ft from the house has -98 dBM in normal operation. The 1010 loop will actually be better than that, but the 1530 is a better comparision for the AOR.

My radio with no antenna connected shows -130 dBM with all the house electrics on.

I then mounted a second 1530 alongside the AOR and had readings of -83 dBM (AOR) & -90 dBM (Welbrook) I did use a number of ferrite choke cores on the AOR but they made no difference.

The tuning of the AOR is very very sharp, which is fine IF you know the frequency you want if not it's a real pain. The preset frequency ranges given by the control box are ok, with an option to use the antenna in broadband mode which I found to be useless. I was told that the AOR uses a series of band pass / cut off filters to achive it's "tuning" , if that is correct then they work reasonably well.

Because of the very sharp tunning I did not find IMD to be an issue, but then if the antenna is deaf IMD is automatically less of an issue.

Remember that the control cable supplies power to the antenna and with no power the antenna will not function at all, I do not complain about that, but I was unable to discover if a longer control cable is available or the wiring configuration of the cable (supplied by Buffalo). So a longer control cable might be a challenge, unless you cut and splice.

Compared to the 1530 the AOR was seriously deaf, so bad was it I thought I had an installation problem and double checked my work.

I have a couple of very experienced ham radio enthusiasts near me, who know more about aerials than I ever will and I invited them over to see if my findings were correct. They were as surprised at just how bad the AOR was, I say again perhaps I had a bad unit.

Given that the AOR is deaf right out of the box, then having to mount the aerial within the electrical field of the house because of the short control cable makes the aerial unusable. I must repeat again that perhaps I had a bad unit, I do hope I did because this is not the sort of product I would expect from AOR let alone for the very high UK price.

This is just my personal experience of the AOR.

Kind regards

Stephen

10819. Re: [loopantennas] Re: AOR LA800

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-18 14:09:12 UTC
From: Andrew Ikin
Topic: 10783 Message: 10819

Thanks Stephen,

I would expect that a tuned loop would provide at least a 10dB improvement in s/n compared to any Broadband loop; assuming that both antennas are used in quiet RF environment.
If you suspect the AOR is bad; is it possible to return it for a replacement?

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, November 18, 2014 12:25 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: AOR LA800

Hello Andrew

When I first installed the AOR the noise floor was very high around -40 dBM, I put this down to the fact I had the aerial mounted close to the house because of the "short" control cable. When I shut down most of the house electrics the noise dropped to around -83 dBM. My standard 1530 loop mounted 55 ft from the house has -98 dBM in normal operation. The 1010 loop will actually be better than that, but the 1530 is a better comparision for the AOR.

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The tuning of the AOR is very very sharp, which is fine IF you know the frequency you want if not it's a real pain. The preset frequency ranges given by the control box are ok, with an option to use the antenna in broadband mode which I found to be useless. I was told that the AOR uses a series of band pass / cut off filters to achive it's "tuning" , if that is correct then they work reasonably well.

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Compared to the 1530 the AOR was seriously deaf, so bad was it I thought I had an installation problem and double checked my work.

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Given that the AOR is deaf right out of the box, then having to mount the aerial within the electrical field of the house because of the short control cable makes the aerial unusable. I must repeat again that perhaps I had a bad unit, I do hope I did because this is not the sort of product I would expect from AOR let alone for the very high UK price.

This is just my personal experience of the AOR.

Kind regards

Stephen

10820. Re: Active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-26 13:31:31 UTC
From: nscsxrr@...
Topic: 3116 Message: 10820

I need schematic for wl 500 to. Thanks Railroad

10821. Maybe interessting for your link list

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-11-26 18:02:12 UTC
From: oe8apr@...
Topic: 10821 Message: 10821

Hello dear OM,

there is a new online community for ham radio operators with many features available. The website URL is www.socialhams.net, please have a look and maybe your are interessted in adding the link to your directory. We would be glad to see you joining the community too.

Thanks in advance!

vy 73 de Andreas
OE8APR

10822. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-01 15:11:59 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10822

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
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>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
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> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10823. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-01 15:11:59 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10823

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10824. Pixel Pro-1a rotator suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-03 14:11:46 UTC
From: JRTOW3RD@...
Topic: 10824 Message: 10824

I mounted my previously outdoor mounted Pro-1a and it's 5 ft mast into a CM tripod base and sat it in the floored walkup attic of the garden home I moved to 7/13. It's a bit of a trip to go for the trek to the other end of the hose, thru a door, upstairs, thru another door, and back to roughly over the office where I have my 'shack' - then turn the antenna - and return. I couldn't tell which direction the null is now, either! I need a rotator! I am considering the RS 15-1245 rotator ($60 less $10 'coupon'...), as it looks to have a rotation 'indicator' of some sort. I imagine it's not inherently synchronized - but should last as the temperature extremes of my attic are all it will have to contend with... hopefully! Suggestions/opinins/use-reports would certainly be appreciated! Thank you.

John

10825. Re: Pixel Pro-1a rotator suggestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-03 15:22:30 UTC
From: jfarley44@...
Topic: 10824 Message: 10825

Hi John;

I am using an AR-303 rotator with a small resonant loop, and have had this mounted outdoors for about 3 years now. This appears to be identical to the RS unit. I have had no problems with the rotator head itself, and it has worked without problems here in Chicago in temps down to -20F. I do not use it for DFing or signal nulling, but tweak it occasionally to depress local noise as heard on the loop.

The control itself has its issues, and I have had to open it a couple of times to find and remove pieces of broken plastic which jammed it up. This appears to be a common problem, but none of the problems I have had have been game enders.

For $50 this is a good deal and should work fine, especially for an indoor siting.

joe

10826. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-06 09:48:46 UTC
From: qrp.gaijin@...
Topic: 10701 Message: 10826

In loopantennas@yahoogroups.com, <richard@...> wrote :

> It has been experimentally verified countless times that helically
> loaded verticals have no special properties compared to conventional
> loading coils. Why should it be different with loops?

The detrimental effect on efficiency of helical winding of a small loop has finally been verified in practice by K4HKX with experimental data measured using the Reverse Beacon Network and carefully controlling for environmental parameters. The result: helical winding introduces loss, about 1-2 dB with K4HKX's loop, compared to a non-helically-wound loop of equivalent enclosed area. W8JI already pointed this out more than three years ago when the helically-wound loop was first proposed. Quote by W8JI: "Regretfully, all helcially winding the small loop does is increase inductance and loss resistance. It is of no benefit at all for radiation." (Reference: http://www.eham.net/articles/26572 http://www.eham.net/articles/26572)

The measured objective data showing this conclusion can be seen here: http://qrz.com/db/k4hkx http://qrz.com/db/k4hkx (see "Section 3: Magloop Comparisons vs My Reference 40M Dipole:" and "Section 9: Helically Wound Magloop".

Simply winding the strap non-helically around the support frame would improve efficiency (see for example K4HKX's aluminum strap loop) by reducing the current path length and the loss resistance.

Best regards,

qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

---In loopantennas@yahoogroups.com, <richard@...> wrote :

On 8/30/2014 6:12 AM, jwin95@... mailto:jwin95@... [loopantennas] wrote:
> Rick, since I have seen differences between 'real life' and what NEC-2
> based MOM modelers yield regarding loop antennas, I don't have quite the
> 'faith' you do in their infallibility. Were it not for the fact that a
> helical loop is not a simple planar (2-space) structure but occupies a
> non-trivial amount of volume in 3-space I would still like to see a
> basis-in-physics explanation outside of the reliance of the usual
> modeling programs.

It would be very easy to build a loop and put in lumped element
inductors to experimentally verify that magic happens or doesn't happen.
But consider this thought experiment. If the loop radiation
resistance is only 0.013 ohms, any coils you insert with more than a few
dozen ohms of reactance add significant losses relative to 0.013 ohms.
But a few dozen ohms of reactance has negligible effect on anything. A
helically wound strap is not a free lunch. The total conductor path is

longer and narrower, hence increasing losses.

It has been experimentally verified countless times that helically loaded verticals have no special properties compared to conventional loading coils. Why should it be different with loops?

>
> Yet to be explained as well is the phenom where Ae > physical size as it
> may apply to loops.

What is it that hasn't been explained? Lots of antennas have Ae > physical size. That doesn't mean that helically wound loops have additional Ae. Where physical size comes into play is that you cannot simultaneously have small physical size and high efficiency without extremely narrow bandwidth and limited power handling due to the necessarily high loaded Q. The proof of this is independent of how the antenna is constructed. The article originally cited makes no mention of bandwidth.

Rick N6RK

10827. Vacuum Variable Cap Capacitor Wanted

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-06 15:11:45 UTC
From: paul@...
Topic: 10827 Message: 10827

Hi all,
I am wanting to modify my AMA4 80/160m loop to have a vacuum cap
Would like it to be around 20pf to 600pf 15KV

Paul G0HWC
Ham Radio Antennas and Tower http://www.g0hwc.com/antennas.html

http://www.g0hwc.com/antennas.html

Ham Radio Antennas and Tower http://www.g0hwc.com/antennas.html My ham radio antenna system and ham radio tower including SteppIR and top band magnetic loop

View on www.g0hwc.com http://www.g0hwc.com/antennas.html
Preview by Yahoo

10828. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-06 17:47:26 UTC
From: Richard (Rick) Karlquist
Topic: 10701 Message: 10828

Folklore dies hard.

At a recent ham convention some clown brought his
helically loaded loop and put it on display. He
proudly held court and explained to anyone
who would listen about how great it was. I
bet my 4 inch Hi-Q screwdriver with CB whip
on top could beat that loop in a shoot out.

Rick N6RK

On 12/6/2014 1:48 AM, qrp.gaijin@... [loopantennas] wrote:
> In loopantennas@yahoogroups.com, <richard@...> wrote :
>
>
> > It has been experimentally verified countless times that helically
> > loaded verticals have no special properties compared to conventional
>> loading coils. Why should it be different with loops?
>
> The detrimental effect on efficiency of helical winding of a small loop
> has finally been verified in practice by K4HKX with experimental data
> measured using the Reverse Beacon Network and carefully controlling for
> environmental parameters. The result: helical winding introduces loss,
> about 1-2 dB with K4HKX's loop, compared to a non-helically-wound loop
> of equivalent enclosed area. W8JI already pointed this out more than
> thre! e years ago when the helically-wound loop was first proposed.
> Quote by W8JI: "Regretfully, all helcially winding the small loop does
> is increase inductance and loss resistance. It is of no benefit at all
> for radiation." (Reference: http://www.eham.net/articles/26572)
>
> The measured objective data showing this conclusion can be seen here:
> http://qrz.com/db/k4hkx (see "Section 3: Magloop Comparisons vs My
> Reference 40M Dipole:" and "Section 9: Helically Wound Magloop".
>
> Simply winding the strap non-helically around the support frame would
> improve efficiency (see for example K4HKX's aluminum strap loop) by
> reducing the current path length and the loss resistance.
>
> !
> Best regards,
> qrp.gaijin@...
> http://qrp-gaijin.blogspot.com
>
> ---In loopantennas@yahoogroups.com, <richard@...> wrote :
>
> On 8/30/2014 6:12 AM, jwin95@... <mailto:jwin95@...> [loopantennas] wrote:

>
> > Rick, since I have seen differences between 'real life' and what
> NEC-2
> > based MOM modelers yield regarding loop antennas, I don't have quite the
> > 'faith' you do in their infallibility. Were it not for the fact that a
> > helical loop is not a simple planar (2-space) structure but occupies a
> > non-trivial amount of volume in 3-space I would still like to see a
> > basis-in-physics explanation outside of the reliance of the usual
> > modeling programs.
>
> It would be very easy to build a loop and put in lumped element
> inductors to experimentally verify that magic happens or doesn't happen.
> But consider this thought experiment. If the loop radiation
> resistance is only 0.013 ohms, any coils you insert with more than a few
> dozen ohms of reactance add significant losses relative to 0.013 ohms.
> But a few dozen ohms of reactance has negligible effect on anything. A
> helically wound strap is not a free lunch. The total conductor path is
> longer and narrower, hence increasing losses.
>
> It has been experimentally verified countless times that helically
> loaded verticals have no special properties compared to conventional
> loading coils. Why should it be different with loops?
>
> >
> > Yet to be explained as well is the phenom where Ae > physical size as it
> > may apply to loops.
>
> What is it that hasn't been explained? Lots of antennas have
> Ae > physical size. That doesn't mean that helically wound loops
> have additional Ae. Where physical size comes into play is that
> you cannot simultaneously have small physical size and high efficiency
> without extremely narrow bandwidth and limited power handling due to
> the necessarily high loaded Q. The proof of this is independent of how
> the antenna is constructed. The article originally cited makes no
> mention of bandwidth.
>
> Rick N6RK
>
>

10829. Re: Modeling inductively loaded loop (was Re: [loopantennas] Re:)

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-07 17:42:01 UTC
From: jwin95@...
Topic: 10701 Message: 10829

Let's cut to the chase, per the author:

The helical loop (#3) is the least efficient, also as expected due to the extra length copper conductor, increased skin effect and current crowding losses.

BTW, that was 12.5 mil copper tape he used, and not all quote "copper" unquote alloys posses the same conductivity.

Overall, I'm surprised the correlation was within 1.5 dB given differences; I would have used 1) a larger diameter form and 2) greater spacing between turns and 3) constructed a reference loop using the same copper tape.

BTW, if you start letting W8JI write your physics handbooks you will set 'science' back about 100 years ... he's right when it comes to bread and butter mainstream 'hammy' issues but runs out gas on the fringes (IOW he is not a physicist.)

Jim

10830. Quick and easy AM broadcast antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-08 16:32:54 UTC
From: Gordon Quickstad
Topic: 10830 Message: 10830

THE STORY:
I bought a new Sharp compact stereo and the AM reception is worse than horrible with the supplied 8-loops-of-wire-on-a-plastic-form "AM antenna." My 20 year old Aiwa that I replaced had the same exact plastic antenna but with 6 loops of wire.

I went to Goodwill and bought a $3.99 clock radio thinking I'd take the ferrite rod antenna out, wrap some wire around it, and voila, plug it in as an external antenna. While looking closely inside, I see that the ferrite rod is actually connected to the tuning capacitor and is part of a resonate circuit so I put the the radio back together, checked it for working again, and I'll use the in-store credit to buy a shirt.

GETTING CLOSE TO THE QUESTION:
Last night I got on Ebay and found 200' of 10/46 Litz wire for $7 and ordered it. This hair-brained idea is to wind the small Litz wire on the stock wire - loop form and get better reception (more turns is better, right?)

THE QUESTION:
Can I use 200' of small Litz wire, when it arrives, in place of the supplied antenna of the short 8 wire loop and get better AM reception? I really don't want to have an antenna that I have to tune with an external capacitor. Of course I'm OK with spinning it around to adjust for maximum signal.

Thanks in advance.

10831. Re: [loopantennas] Quick and easy AM broadcast antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-08 18:16:38 UTC
From: Richard (Rick) Karlquist
Topic: 10830 Message: 10831

On 12/8/2014 8:32 AM, Gordon Quickstad ceeohtoo@... [loopantennas] wrote:
> THE STORY:
> I bought a new Sharp compact stereo and the AM reception is worse than
> horrible with the supplied 8-loops-of-wire-on-a-plastic-form "AM
> antenna." My 20 year old Aiwa that I replaced had the same exact plastic
> antenna but with 6 loops of wire.
>

How do you know the antenna is at fault? What specifically is the problem with reception? "Modern" AM tuners are of the "tuner on a chip" variety, and the newer designs eschoo passives so the whole tuner is indeed on the chip. This results in inferior performance to older designs.

I think you answered your own question. The 20 year old Aiwa has the same antenna (except for the unimportant detail of the number of turns) and works great.

Both the historical GE Superradio's and the current ones use ferrite rod antennas. But the electronics in the current ones are junk.

If your only problem with the Sharp is insufficient sensitivity, simply replace the supplied loop with a larger one with fewer turns to maintain the inductance. Doubling the size will magically give you 6 dB more signal.

Rick N6RK

10832. Re: [loopantennas] Quick and easy AM broadcast antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-08 18:57:45 UTC
From: ceeohtoo@...
Topic: 10830 Message: 10832

Thanks for the help.

To expand a little, the problem is poor signal to noise ratio on (probably) all stations. Other old discrete electronics portable radios that I own in the same location pull in the stations clearly with their ferrite antennae. I bought the Litz wire because I'm thinking that using low-loss Litz wire on the stock antenna form, and lots of turns, will help. I didn't know that using a physically larger loop would give 6db in itself. Yes, you're right, both the AM and FM electronics on the radio are in a very small shielded enclosure right where the antennas plug into in back and it's about "chip" sized (I saw it when I had to fix the CD changer on the newly purchased system because A. I'm mechanically inclined and B. don't like waiting for repairs, so I took the risk and broke the warranty and went inside with success but no future warranty).

Shouldn't just using more turns on the stock form intercept more signal and improve the SNR? And how about more turns AND also changing to a larger antenna form to wind turns on? Since it's a shelf stereo, I'm size limited on space for spinning the antenna around to the best reception.

There are some neat talk programs on AM because air time is so cheap so I do like to break away from the typical FM fare but can't stand just 50% signal with 50% static noise which I currently have.

10833. Re: [loopantennas] Quick and easy AM broadcast antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-08 19:11:43 UTC
From: Richard (Rick) Karlquist
Topic: 10830 Message: 10833

Increasing the number of turns increases signal VOLTAGE
but also increases inductance. If the radio electronics
are resonating out the inductance, you don't want to mess
with the value of inductance. (If the radio electronics
are NOT resonating out the inductance, no wonder you have
such poor sensitivity). If you double the diameter, but
use 70.7% as many turns the inductance will remain the
same. You can also make the loop taller but not wider.
This will still give you more pickup area but will not
exceed the space behind the radio.

Rick N6RK

On 12/8/2014 10:57 AM, ceeohtoo@... [loopantennas] wrote:
>
> Shoul! dn't just using more turns on the stock form intercept more
> signal and improve the SNR? And how about more turns AND also changing
> to a larger antenna form to wind turns on? Since it's a shelf stereo,
> I'm size limited on space for spinning the antenna around to the best
> reception.

10834. Re: [loopantennas] Quick and easy AM broadcast antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-08 19:54:52 UTC
From: Don
Topic: 10830 Message: 10834

I had the same problem with a $150 Sony stereo. The AM reception is really terrible. I live east of Los Angeles and the AM band is chock full of stations but the stereo will hardly pick up any except the 50000 watters. Also it acts like there is no AGC. High power stations like KFI come in only fair and weaker ones like 10000 watts are too poor and noisy to listen to. The volume must be turned up high to hear them like the 50 kW stations. Then you have to remember to back down the volume before changing stations.

Anyway I "solved" it with an external outside active antenna. But I was still not happy. The no AGC problem bugged me so I now use a $100 Drake PRN 1000 100 kHz - 30 mHz SW AM only receiver with the active antenna and feed the audio to the "portable" input.

You can use the extra little loop to couple another antenna with some wire connected to it to your rx by placing the two loops close together and changing the orientation for best reception. Maybe that will help without spending a bunch of $$$.

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
FRG-100B FunCube Dongle Pro+
ICF2010 Perseusx3 WR-G31DDC
R70 R71A w/250Hz R75x2 w/250Hz
SDR-IQ SPR-4 SSR-1
SR-AF & LPF DSP599zx MFJ-784B
HD-1418 AF-1 MSB-1
PA0RDT Mini-Whipx2 @ 25ft
RYO Active Antenna @ 25ft
ALA100Lx2 Z1501F @20ft w/9ft Whip
Solarcon A-99

On 08-Dec-14 08:32, Gordon Quickstad ceeohtoo@... [loopantennas]
wrote:
>
>
> THE STORY:
> I bought a new Sharp compact stereo and the AM reception is worse than
> horrible with the supplied 8-loops-of-wire-on-a-plastic-form "AM
> antenna." My 20 year old Aiwa that I replaced had the same exact plastic
> antenna but with 6 loops of wire.
>
> I went to Goodwill and bought a $3.99 clock radio thinking I'd take the
> ferrite rod antenna out, wrap some wire around it, and voila, plug it in
> as an external antenna. While looking closely inside, I see that the

> ferrite rod is actually connected to the tuning capacitor and is part of
> a resonate circuit so I put the the radio back together, checked it for
> working again, and I'll use the in-store credit to buy a shirt.
>
> GETTING CLOSE TO THE QUESTION:
> Last night I got on Ebay and found 200' of 10/46 Litz wire for $7 and
> ordered it. This hair-brained idea is to wind the small Litz wire on
> the stock wire - loop form and get better reception (more turns is
> better, right?)
>
> THE QUESTION:
> Can I use 200' of small Litz wire, when it arrives, in place of the
> supplied antenna of the short 8 wire loop and get better AM reception? I
> really don't want to have an antenna that I have to tune with an
> external capacitor. Of course I'm OK with spinning it around to adjust
> for maximum signal.
>
> Thanks in advance.
>
>
>

10835. Re: [loopantennas] Quick and easy AM broadcast antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-08 20:12:06 UTC
From: Robert Cavanaugh
Topic: 10830 Message: 10835

One more thing that was implied but not stated:The radio will pick up most efficiently at resonance, which requires both the inductance and the capacitance of the final (tuned circuit+antenna system) to be matched {Fr = 1/(2*pi*sqrt(L*C))}. If you increase the inductance of the antenna beyond the range of the variable capacitor (either external or internal varactor) you don't buy yourself anything except worse performance (the loop will act as a pre-selector and mute the signal of interest). Make sure you keep the inductance of the antenna system roughly the same, which means as stated earlier in this thread increasing the area enclosed by the loop if you increase the number of turns. Inductance increases roughly by the square of the number of turns so you need to increase the area accordingly (as stated earlier in the thread).
73s,Bob Cavanaugh - AG6YK

On Monday, December 8, 2014 11:12 AM, "'Richard (Rick) Karlquist' richard@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  Increasing the number of turns increases signal VOLTAGE
but also increases inductance. If the radio electronics
are resonating out the inductance, you don't want to mess
with the value of inductance. (If the radio electronics
are NOT resonating out the inductance, no wonder you have
such poor sensitivity). If you double the diameter, but
use 70.7% as many turns the inductance will remain the
same. You can also make the loop taller but not wider.
This will still give you more pickup area but will not
exceed the space behind the radio.

Rick N6RK

On 12/8/2014 10:57 AM, ceeohtoo@... [loopantennas] wrote:
>
> Shoul! dn't just using more turns on the stock form intercept more
> signal and improve the SNR? And how about more turns AND also changing
> to a larger antenna form to wind turns on? Since it's a shelf stereo,
> I'm size limited on space for spinning the antenna around to the best
> reception.

10836. Re: [loopantennas] Quick and easy AM broadcast antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-08 20:07:26 UTC
From: Dexter
Topic: 10830 Message: 10836

Assuming this is a typical digital AM receiver, the original ferrite "loop" antenna is untuned and feeds an FET RF amplifier as a broadband antenna. That's why it's not particularly sensitive. Good results can be obtained winding about 5 turns of hook-up wire around the existing coil (no direct connection) to serve as an inductively-coupled pickup. The ends of the added pick-up coil can then be used as the connection point for a simple dipole or another loop. A long wire can be connected to one lead of the added pick-up coil, but the remaining lead should be grounded.

Regards,

Dexter

On 12/8/2014 11:32 AM, Gordon Quickstad ceeohtoo@...
[loopantennas] wrote:
> THE STORY:
> I bought a new Sharp compact stereo and the AM reception is worse than
> horrible with the supplied 8-loops-of-wire-on-a-plastic-form "AM
> antenna." My 20 year old Aiwa that I replaced had the same exact
> plastic antenna but with 6 loops of wire.
>
> I went to Goodwill and bought a $3.99 clock radio thinking I'd take
> the ferrite rod antenna out, wrap some wire around it, and voila, plug
> it in as an external antenna. While looking closely inside, I see that
> the ferrite rod is actually connected to the tuning capacitor and is
> part of a resonate circuit so I put the the radio back together,
> checked it for working again, and I'll use the in-store credit to buy
> a shirt.
>
> GETTING CLOSE TO THE QUESTION:
> Last night I got on Ebay and found 200' of 10/46 Litz wire for $7 and
> ordered it. This hair-brained idea is to wind the small Litz wire on
> the stock wire - loop form and get better reception (more turns is
> better, right?)
>
> THE QUESTION:
> Can I use 200' of small Litz wire, when it arrives, in place of the
> supplied antenna of the short 8 wire loop and get better AM reception?
> I really don't want to have an antenna that I have to tune with an
> external capacitor. Of course I'm OK with spinning it around to
> adjust for maximum signal.
>
> Thanks in advance.

10837. Re: Active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-09 16:09:38 UTC
From: nscsxrr@...
Topic: 3116 Message: 10837

Cant pm u Frasier ? Only partial email address

10838. Box Loop Antenna to Car Radio

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-19 17:23:26 UTC
From: hmholden69@...
Topic: 10838 Message: 10838

I would love to try my 3 Ft.Box Loop antenna with a car radio, but not sure how to interface the two. I have been told that the normal cable from the car antenna to the radio is a special low capacity type. Any ideas on how to hook up a loop to a car radio in the shack? I have an especially good car radio that I would like to MW DX with using my box loop.

10839. Re: [loopantennas] Box Loop Antenna to Car Radio

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-19 17:47:48 UTC
From: Brian
Topic: 10838 Message: 10839

Hi,
There is a fair chance you would overload the radio as I believe they are designed for a small whip type antenna. !!!!!
Others may know differently, take care.
72, Brian, G0NSL.
From: mailto:loopantennas@yahoogroups.com
Sent: Friday, December 19, 2014 5:23 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Box Loop Antenna to Car Radio

10840. What's a Good Tripod to get for the AlexLoop Walkman Antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-18 00:56:58 UTC
From: GARRIS TV
Topic: 10840 Message: 10840

What is a good-Looking Well-fitting "Tripod" to purchase for the AlexLoop Walkman Portable Antenna?

Any photos or URL Links appreciated.

(prefer all black)
(prefer Weatherproof)
(be nice to have a carry bag but NOT necessary)

Danny Garris - KJ4FH
New Bern, NC

10841. Re: [loopantennas] Box Loop Antenna to Car Radio

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-20 08:08:55 UTC
From: John
Topic: 10838 Message: 10841

The whip antenna acts as if it is a low value capacitor, say 10 pF or
so. The capacitance of the cable would form a capacitor divider and
most of the signal from the antenna would be lost.

A box loop with either an amplifier or a low impedance coupling loop can
drive normal coax without excess signal loss.

Car antenna plugs are available on ebay.
<http://www.ebay.com/itm/5pcs-Car-Radio-Auto-Motorola-Type-Male-Antenna-Plug-Connector-STR
AIGHT-/151491148914?pt=US_Radio_Antennas&hash=item2345937c72>
These are sometimes called Motorola connectors
https://en.wikipedia.org/wiki/Motorola_connector

A premade radio antenna to BNC cable along with an adapter from BNC to
the connector type on the loop, along with a BNC extension might be the
easiest approach.
<http://www.ebay.com/itm/AM-FM-Radio-Antenna-Extension-Adapter-Cable-BNC-plug-to-AM-FM-plu
g-Cable-RG58-/160859568134?pt=US_Portable_AM_FM_Radios&hash=item2573fa3806>

John

On 12/19/2014 9:23 AM, hmholden69@... [loopantennas] wrote:
>
>
> I would love to try my 3 Ft.Box Loop antenna with a car radio, but not
> sure how to interface the two. I have been told that the normal cable
> from the car antenna to the radio is a special low capacity type. Any
> ideas on how to hook up a loop to a car radio in the shack? I have an
> especially good car radio that I would like to MW DX with using my box loop.
>
>
>
>
>

10842. Re: Box Loop Antenna to Car Radio

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-20 10:35:07 UTC
From: David Sarraf
Topic: 10838 Message: 10842

The radios I grew up with, and a lot of aftermarket radios, use a Motorola connector. Newer car radios, especially the multi-function radios that are now common, use what is called a FAKRA connector. These are smaller coaxial connectors with locking tabs and color coding for the application (AM/FM, satellite, gps, etc). They are also 50 ohm impedance. You can find FAKRA-to-Motorola pigtails on Ebay and at

http://www.installer.com/main.php?page=antenna-parts

Installer.com also listed amplified whip antennas at that link. They'd be a lot easier to install than a loop. You could also roll your own, such as the PA0RDT mini-whip.

Dave Sarraf

10843. Got my AlexLoop Walkman antenna today!!!

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-19 20:52:26 UTC
From: GARRIS TV
Topic: 10843 Message: 10843

I got my AlexLoop Walkman antenna in the mail today (FYI $339.95 On Sale HRO but GigaParts matched price). I am absolutely BLOWN AWAY at how well this small 36" loop woks. In less than a few minutes I was working stateside stations on 20M. My first contact was WIAW / Portable 4 in Georgia with 5/9 report. As well as several other stations. I am blown away at how well this small antenna performs!!!! I have a MicroTune AlphaLoop on the way as well to compare the two. This is my first loop antenna experience and I am impressed!!!! Danny KJ4FH, New Bern, NC

----- Sent from mBox Mail Hotmail for iPhone and iPod Touch
http://www.fluentfactory.com/mboxmail

10844. Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-25 10:50:37 UTC
From: goodgun@...
Topic: 10844 Message: 10844

Merry Christmas everyone,

Does anyone know if a multi-turn loop antenna has the same or similar performance as a single turn anttenna. eg 2 turns vs 1 turn.

73's
Colin ZL1BTT

10845. Re: Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-25 11:58:36 UTC
From: qrp.gaijin@...
Topic: 10844 Message: 10845

In loopantennas@yahoogroups.com, <goodgun@...> wrote :

> Does anyone know if a multi-turn loop antenna has the same or
> similar performance as a single turn anttenna. eg 2 turns vs 1 turn.
>
> 73's
> Colin ZL1BTT

Your question is rather vague, but perhaps the following document may be of help.

http://www.ece.msstate.edu/~donohoe/ece4990notes5.pdf
http://www.ece.msstate.edu/~donohoe/ece4990notes5.pdf

Quote from page 6 of that document: "The fields radiated by an electrically small loop antenna can be increased by adding multiple turns. For the far fields, the added height of multiple turns is immaterial and the resulting far fields for a multiple turn loop antenna can be found by simply multiplying the single turn loop antenna fields by the number of turns N."

The radiation increase isn't free, however. You need to think about the loss you are adding as well by introducing the extra turns. The total conductor length is increased, and the current distribution in the multi-turn structure will not be uniform due to proximity effect (which increases ohmic loss).

I think a carefully-engineered multi-turn loop could be more efficient than a single-turn loop for certain frequencies.

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10846. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-25 13:32:35 UTC
From: Chris Trask
Topic: 10844 Message: 10846

>
>Merry Christmas everyone,
>
>Does anyone know if a multi-turn loop antenna has the same or similar performance as a single turn anttenna. eg 2 turns vs 1 turn.
>

At best they can be similar. The intra-winding (between turns) capacitance will cause the parallel resonance to be lower. The turns should be spaced at least two conductor diameters apart. I described this in my 2-part series on loop antennas in QEX many years ago.

Ribbon cable is a very bad idea.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10847. Ferrite Sleeve Loops Antennas (FSL) For Sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-25 16:37:50 UTC
From: everettsharp@...
Topic: 10847 Message: 10847

If anyone is interested, I am in the process of building two 7.5" diameter X 7.5" long Ferrite Sleeve Loop Antennas (FSL). In the past I have done many experiments with this size FSL, and there is an article posted on this sight covering those experiments.

I will be selling both of them and will either build them as single band, or dual band. With the single band units I can build them for LW, or MW coverage. With the dual band units they will cover both LW and MW bands. Based on my past experiments I know that they will perform equal to, or better than a 4' box loop. My method of building is using ferrite bars rather than rods and based on my experiments, I can not tell any difference in performance between the two methods. With the bars they are much lighter in weight and allow for a much nicer looking build.

Both FSLs will have Red Oak end pieces and will be mounted on a Lazy Susan with Red Oak top and bottom. The variable capacitors that I will use are the very small Russian high Q units, with a 3:1 turn ratio. The front panels will have nice looking graphics.

The prices for the FSLs will be $400 for MW band coverage, $435 for LW coverage and $475 for dual band coverage, plus shipping cost. These will be built first class, no junk. At this point I have most of the mechanical work completed and the ferrite bars have been epoxied to the substrates and covered with fiberglass and are ready to be wound.

These maybe the last that I build, although I still have materials to build more.

If anyone is interested in one of these please contact me off list at everettsharp A O L and I will configure them to your specification.

Everett N8CNP

10848. Re: Got my AlexLoop Walkman antenna today!!!

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-25 22:52:52 UTC
From: jwin95@...
Topic: 10843 Message: 10848

Very good! Good to see the loop is performing for you!

Tonight, as last night, I'm getting WSPR* 'spots' on a loop long-path to VK-land on 40 meters at 4:30 PM CST ... the loop here is a Quarter-wavelength, 32 ft circumference, 8 ft per side tuned loop about 12 ft above ground out in the back yard.

Proof, again, that loop can and do work!

73,
Jim WB5WPA

* WSPRnet.org

10849. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-26 06:02:17 UTC
From: Andy
Topic: 10844 Message: 10849

A thought or two to consider: If you make a small 1-turn loop that is 50% efficient, then half the power you feed into it gets turned into RF that radiates. If you make a small 2-turn loop and manage to keep the efficiency at 50%, the best it can do is radiate the same.

In order to get a better radiator, either the efficiency must go up (less losses), or the antenna can be made more directional to concentrate some of that energy in a particular direction. I don't think you can change the directionality of an electrically small loop by using the same basic coil form. Any electrically small round loop in air has pretty much the same directionality to it.

So the thing you need to concentrate on, is cutting the I*R losses.

Connecting the turns in parallel, rather than series, may help with that.

The different number of turns can affect the impedance seen by whatever drives the antenna, so it might affect your ability to match the antenna and get power into it.

A large loop antenna (i.e., circumference comparable to a half wavelength or more) plays by different rules than a small loop. In a small loop where the total wire length is short, the current in each turn is the same, so their effects complement one another. In a large loop, the currents could be out-of-phase between one turn and the next turn, resulting in rather different results (partial cancellation?).

Regards,
Andy

10850. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-26 07:03:12 UTC
From: gnuarm.2007@...
Topic: 10844 Message: 10850

Yes, but what makes you believe the efficiency will be the same? Adding loops raises the impedance which means the same power will have a higher voltage and lower current after matching. This in turn means the I2R losses will be lower in spite of the higher resistance. Here is an example.

A 2 turn loop has four times the impedance so the current will be a quarter. The resistance will double. The resulting I2R losses will be (1/4)^2*2 or 1/8 the losses compared to a single turn loop if the same conductor is used.

Of course if you are using a single turn loop for transmitting it is likely to be something substantial such as copper pipe. That makes it hard to build with multiple turns. But I don't think paralleling turns would do what you expect. Then there are the losses in impedance matching if needed.

Rick

10851. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-26 07:29:14 UTC
From: goodgun@...
Topic: 10844 Message: 10851

Hi Rick,

Thank you for that information.
I am using 1 inch diameter heliax and wanted a size reduction without a performance reduction.

73;s
Colin ZL1BTT

10852. RE: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-26 09:46:20 UTC
From: dx11
Topic: 10844 Message: 10852

Rick,

I assume you want to make your comparison for the situation where the power remains the same. In that case a four times higher impedance results in a voltage that is twice as high and a current that is halved. So the resulting power loss is 1/2 instead of 1/8. Or is it me who’s wrong?
>>A 2 turn loop has four times the impedance so the current will be a quarter. The resistance will double. The resulting I2R losses will be (1/4)^2*2 or 1/8 the losses compared to a single turn loop if the same conductor is used.<<

But the meaning of your statement does not change.

Cor PA4Q

10853. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-26 13:33:43 UTC
From: Chris Trask
Topic: 10844 Message: 10853

>
>In order to get a better radiator, either the efficiency must go up (less
>losses), or the antenna can be made more directional to concentrate some of
>that energy in a particular direction. I don't think you can change the
>directionality of an electrically small loop by using the same basic coil
>form. Any electrically small round loop in air has pretty much the same
>directionality to it.
>
>So the thing you need to concentrate on, is cutting the I*R losses.
>

The efficiency improves with larger diameter conductors. Some day I would like to own one of those large Harbor Freight tubing benders so I can make loops with 1" copper pipe.

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

10854. RE: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-26 16:39:59 UTC
From: gnuarm.2007@...
Topic: 10844 Message: 10854

Yes, you are absolutely right. I'm down with a cold and there is no room left for doing things in my head, lol. As you say, for constant power to the antenna the voltage will double and the current will halve. Using I2R the resistive power loss will be cut in half, not 1/8 as I wrote before.

I don't know if it is common to link antenna efficiency to Q, but in this case the equations seem to be the same. It is the ratio of the inductive reactance to the resistance, as long as the reactance dominates.

Rick

10855. Re: [loopantennas] Multiiturn loop antenna MFJ-936B on 40M

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-26 03:00:20 UTC
From: daiche@...
Topic: 10844 Message: 10855

Hi Chris,

Along the same lines, I have an MFJ-936B loop tuner with all 4 pre-cut 10 Gage wires. If the 28' 40M wire is spread out properly it apparently gets 30% efficiency or so. I have the cross-t frame which is supposed to only handle up to the 13' 20-30M wire, however, I have wound the 28' wire on the frame in a spiral, using all the clips to keep the wire 2"-3" away from itself. The spiral is essentially in 3 progressively smaller loops (5' down to maybe 2'). It seems to work well and I have had no arcing, at least to 50 watts which is the max I use anyway. I have done Pactor/Winmor at 5 watts up to around 800 miles in the daytime, so it gets out. Do you have any feel for efficiency under these circumstances? The tuneup is not far off from what I see as a single big loop and it is much more convenient to use as a smaller spiral. Others with this tuner might like this idea also.

Dave N7NZH Dewey, AZ

10856. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-27 03:41:58 UTC
From: Andy
Topic: 10844 Message: 10856

Rick wrote:

"Adding loops raises the impedance which means the same power will have a higher voltage and lower current after matching. This in turn means the I2R losses will be lower in spite of the higher resistance."

Good point.

Then I suppose the question would be, what does the radiation resistance do when using two or more turns in series?

If it varies the same as inductance (~4X for 2 turns), then it'd be a big win.

Andy

10857. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-27 04:01:46 UTC
From: qrp.gaijin@...
Topic: 10844 Message: 10857

In loopantennas@yahoogroups.com, <ai.egrps@...> wrote :

> Then I suppose the question would be, what does the radiation
> resistance do when using two or more turns in series?

The formula for the radiation resistance of a multi-turn loop is given on p. 11 of the document I posted earlier.

http://www.ece.msstate.edu/~donohoe/ece4990notes5.pdf
http://www.ece.msstate.edu/~donohoe/ece4990notes5.pdf

The radiation resistance increases with the square of the number of turns.

As for the loss resistance, as I said earlier, you need to consider not only the increased conductor length, but also the non-uniform current distribution on the multi-turn conductor surface caused by the proximity effect, which will cause underutilization of the conductor surface and thus an increase in ohmic loss.

The following article is a good read for anyone interested in practical multi-turn small-transmitting loops.

http://books.google.co.jp/books/about/Development_of_the_Multiturn_Loop_Antenn.html?id=-s4lOAAACAAJ&redir_esc=y http://books.google.co.jp/books/about/Development_of_the_Multiturn_Loop_Antenn.html?id=-s4lOAAACAAJ&redir_esc=y

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10858. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-27 04:14:15 UTC
From: Don Sanders
Topic: 10844 Message: 10858

Yes, it looks like a good report but I could not find a download button. My Japanese is worse than my Greek which is zero.

Dr. Don HC4/W4BWS

On Fri, Dec 26, 2014 at 11:01 PM, qrp.gaijin@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> In loopantennas@yahoogroups.com, <ai.egrps@...> wrote :
>
> > Then I suppose the question would be, what does the radiation
> > resistance do when using two or more turns in series?
>
>
> The formula for the radiation resistance of a multi-turn loop is given on
> p. 11 of the document I posted earlier.
>
> http://www.ece.msstate.edu/~donohoe/ece4990notes5.pdf
>
> The radiation resistance increases with the square of the number of turns.
>
> As for the loss resistance, as I said earlier, you need to consider not
> only the increased conductor length, but also the non-uniform current
> distribution on the multi-turn conductor surface caused by the proximity
> effect, which will cause underutilization of the conductor surface and thus
> an increase in ohmic loss.
>
> The following article is a good read for anyone interested in practical
> multi-turn small-transmitting loops.
>
>
> http://books.google.co.jp/books/about/Development_of_the_Multiturn_Loop_Antenn.html?id=-s4lOAAACAAJ&redir_esc=y
>
> Best regards,
>
> qrp.gaijin@...
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> http://qrp-gaijin.blogspot.com
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10859. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-27 10:13:04 UTC
From: gnuarm.2007@...
Topic: 10844 Message: 10859

The answer to that has already been posted. The radiation resistance is a term to account for the power going into an antenna that is radiated rather than turned into heat. Doubling the number of turns quadruples the inductance and reactance. This cuts the current in half for the same power into the antenna, but it also means a matching circuit is required or must be changed. The halved current reduces the loss in the ohmic resistance. More power is radiated. It won't be twice as much power since the increase is coming from the reduced ohmic losses. But the radiation resistance will approximately double.

Rick

10860. Re: [loopantennas] Multiiturn loop antanna

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-27 07:51:00 UTC
From: Will
Topic: 10844 Message: 10860

It should be available somewhere in the US under FOI if the data given
is correct. It's not on the Internet Archive site which is strange as
they have much of US Defense stuff.

Cheers,
Will.
ZL1TAO

On 27/12/14 17:14, Don Sanders w4bws1@... [loopantennas] wrote:
>
>
> Yes, it looks like a good report but I could not find a download button.
> My Japanese is worse than my Greek which is zero.
>
> Dr. Don HC4/W4BWS
>
> On Fri, Dec 26, 2014 at 11:01 PM, qrp.gaijin@...
> <mailto:qrp.gaijin@...> [loopantennas]
> <loopantennas@yahoogroups.com <mailto:loopantennas@yahoogroups.com>> wrote:
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> __
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> In loopantennas@yahoogroups.com
> <mailto:loopantennas@yahoogroups.com>, <ai.egrps@...> wrote :
>
> > Then I suppose the question would be, what does the radiation
> > resistance do when using two or more turns in series?
>
>
> The formula for the radiation resistance of a multi-turn loop is
> given on p. 11 of the document I posted earlier.
>
> http://www.ece.msstate.edu/~donohoe/ece4990notes5.pdf
>
> The radiation resistance increases with the square of the number of
> turns.
>
> As for the loss resistance, as I said earlier, you need to consider
> not only the increased conductor length, but also the non-uniform
> current distribution on the multi-turn conductor surface caused by
> the proximity effect, which will cause underutilization of the
> conductor surface and thus an increase in ohmic loss.
>
> The following article is a good read for anyone interested in

> practical multi-turn small-transmitting loops.
>
> http://books.google.co.jp/books/about/Development_of_the_Multiturn_Loop_Antenn.html?id=-s4lOAAACAAJ&redir_esc=y
>
> Best regards,
>
> qrp.gaijin@... <mailto:qrp.gaijin@...>
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> http://qrp-gaijin.blogspot.com
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10861. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-01-01 15:10:56 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10861

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10862. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-01-01 15:10:56 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10862

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10863. Butterfly Capacitor Kits

Yahoo group: loopantennas (2013 — 2017)
Date: 2014-12-31 18:36:51 UTC
From: pop_vasile@...
Topic: 10863 Message: 10863

Butterfly Capacitor Kits custom made air capacitors,butterfly capacitor parts

Copy of Butterfly Capacitor Plates for a Home Brew Magnetic Loop Antenna
http://www.youtube.com/watch?v=oawiG9jpams

http://www.youtube.com/watch?v=oawiG9jpams

Copy of Butterfly Capacitor Plates for a Home Brew M...
http://www.youtube.com/watch?v=oawiG9jpams Butterfly Capacitor Plates for a Home Brew Magnetic Loop Antenna Butterfly Capacitor Plates 0.04" sheet copper,brass,aluminum OD 3",4",5",6"...

View on www.youtube.com http://www.youtube.com/watch?v=oawiG9jpams
Preview by Yahoo

0.04" sheet copper,brass,aluminum
OD 3",4",5",6",8",10"

VA6POP
CALGARY,AB,CANADA

10864. Schematic wanted to repair C Crane antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-01-29 21:29:44 UTC
From: tpagotie@...
Topic: 10864 Message: 10864

I've got a C Crane twin loop antenna, and it doesn't work. It would same me a lot of time if someone can point me in the direction of a schematic. I've searched all over this forum and internet in general and not come up with anything.

thanks,
tom

10865. Re: [loopantennas] Schematic wanted to repair C Crane antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-01-30 05:25:53 UTC
From: Don
Topic: 10864 Message: 10865
Attachments: 2 described; binary payloads are missing from this source WARC

Here are the circuit and block diagrams from the patent (attached).

I own a Twin Coil Ferrite Antenna but it does not work well for me in my situation. I ended up putting up a SW/HF active antenna (RYOAA (eBay)) outside and running the coax inside to a Drake SPR-4 and also a Drake 1260/PRN1000 connected to the stereo.

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
FRG-100B FunCube Dongle Pro+
ICF2010 Perseusx3 WR-G31DDC
R70 R71A w/250Hz R75x2 w/250Hz
SDR-IQ SPR-4 SSR-1
SR-AF & LPF DSP599zx MFJ-784B
HD-1418 AF-1 MSB-1
PA0RDT Mini-Whipx2 @ 25ft
RYO Active Antenna @ 25ft
ALA100Lx2 Z1501F @20ft w/9ft Whip
Solarcon A-99

On 29-Jan-15 13:29, tpagotie@... [loopantennas] wrote:
>
>
> I've got a C Crane twin loop antenna, and it doesn't work. It would
> same me a lot of time if someone can point me in the direction of a
> schematic. I've searched all over this forum and internet in general
> and not come up with anything.
>
> thanks,
> tom
>
>
>
>
>

10866. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-01 16:24:06 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10866

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
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>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

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Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
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* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10867. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-01 16:24:07 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10867

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10868. Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-09 20:19:16 UTC
From: nick.nickrumple@...
Topic: 10868 Message: 10868

Hi All.....I have a question about a 1 meter, capacitor tuned mag-loop that I am building. So far, after a few trial sessions, it works very well. But, I have been reading many online articles from people who build these antennas. While reading these articles, I noticed that many people made the gap at the top of the antenna (where the tuning capacitor connects across) seem like a very big deal. Many of them quoted figures like 25 mm gap. My question is, does the size of the gap make a difference in the performance of the antenna? Thanks for any help you can give.

Nick Rumple
Kannapolis, North Carolina

10869. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-09 22:22:52 UTC
From: phil blast
Topic: 10868 Message: 10869

Ive only made 3 and followed the old one inch gap rule on the last one which is 25mm and on an ali bicycle wheel and it works great, did make one with pipe and plates soldered on the gap which acted as the capacitor so I guess too close will increase capacitance, on the first one the gap was the width of the single variable capacitor I used which was directly connected to the loop and was about 45 to 50mm and that worked fine so more seems OK.Just my findings others may differ? whatever you do once its working you will enjoy it that is guaranteed.73Phil M6MRP

On Monday, 9 February 2015, 20:19, "nick.nickrumple@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Hi All.....I have a question about a 1 meter, capacitor tuned mag-loop that I am building. So far, after a few trial sessions, it works very well. But, I have been reading many online articles from people who build these antennas. While reading these articles, I noticed that many people made the gap at the top of the antenna (where the tuning capacitor connects across) seem like a very big deal. Many of them quoted figures like 25 mm gap. My question is, does the size of the gap make a difference in the performance of the antenna? Thanks for any help you can give.

Nick Rumple
Kannapolis, North Carolina

10870. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-09 23:13:31 UTC
From: Robert Cavanaugh
Topic: 10868 Message: 10870

Somebody with more knowledge please correct me...I would say that if the gap is significantly less than the overall diameter it shouldn't matter. I say that assuming that the tuning capacitor is much larger than the distributed capacitance of the loop itself and that the inductance of the loop will not deviate greatly from the design model if the gap is small compared to the overall loop area. So if your loop diameter is 12 inches, you should probably not have a gap more than about 1 inch, but I would think with a 6 foot diameter you could get away with two inches. I doubt that the relationship is linear, it may even be related to the radiator thickness; so I would attempt to make the gap small. However, I know of several loop designs where the main radiator is separated by several inches and wires are connected to the tuning capacitor. The actual gap may be small but the large loop radiator has larger physical gap. Sorry this is not more definitive. If anybody can provide a link to the relevant equations that would be very helpful.

73s,Bob Cavanaugh - AG6YK

On Monday, February 9, 2015 2:23 PM, "phil blast dj_philonline@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Ive only made 3 and followed the old one inch gap rule on the last one which is 25mm and on an ali bicycle wheel and it works great, did make one with pipe and plates soldered on the gap which acted as the capacitor so I guess too close will increase capacitance, on the first one the gap was the width of the single variable capacitor I used which was directly connected to the loop and was about 45 to 50mm and that worked fine so more seems OK.Just my findings others may differ? whatever you do once its working you will enjoy it that is guaranteed.73Phil M6MRP

On Monday, 9 February 2015, 20:19, "nick.nickrumple@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Hi All.....I have a question about a 1 meter, capacitor tuned mag-loop that I am building. So far, after a few trial sessions, it works very well. But, I have been reading many online articles from people who build these antennas. While reading these articles, I noticed that many people made the gap at the top of the antenna (where the tuning capacitor connects across) seem like a very big deal. Many of them quoted figures like 25 mm gap. My question is, does the size of the gap make a difference in the performance of the antenna? Thanks for any help you can give.

Nick Rumple
Kannapolis, North Carolina

10871. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-10 03:17:14 UTC
From: Andy
Topic: 10868 Message: 10871

This is mostly from my gut feeling and reasoning, but I present an opposing view. I would tend toward a wider gap rather than narrower. But there may be a lot of leeway.

The ends make a small capacitor, which limits the minimum total capacitance and the maximum frequency to which it can be tuned. If you make the ends very close together, you increase that capacitance and lower the max. frequency and the total tunable frequency range.

For a transmitting antenna, the ends have VERY high voltage so there is a voltage gradient across that gap. Too close, and it will arc.

25mm is an inch. It might have come from an American who used an inch as a round number, which got translated to Metric. What's the breakdown voltage of air? And how large a peak voltage do you have there?

Performance-wise as an antenna, I suspect the gap doesn't make much difference. The high current in the loop follows around the loop and into the wires or straps that tap off to go to the tuning capacitor. Any loop material beyond those points doesn't carry the loop's high current; they just make a capacitor, in parallel with your tuning capacitor. They probably do not radiate anything significant.

Andy

10872. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-10 04:08:44 UTC
From: vk2tti@...
Topic: 10868 Message: 10872

From Max, I've never made a magnetic loop with a "gap" in it. If you put a "gap" in a loop it becomes a folded dipole!! Unless you are talking about a "shielded " loop where the gap is in the shield around the loop element and is part and parcel of the design. Regards to all

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@...m>
Cc:

Sent:
Mon, 9 Feb 2015 22:17:14 -0500
Subject:
Re: [loopantennas] Mag-Loop Antenna question.

This is mostly from my gut feeling and reasoning, but I present an opposing view. I would tend toward a wider gap rather than narrower. But there may be a lot of leeway.

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Andy

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/10871;_ylc=X3oDMTJydXRlYXU5BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDg3MQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0MjM1MzgyNzc-?act=reply&messageNum=10871
[2]
mailto:ai.egrps@gmail.com?subject=Re%3A%20%5Bloopantennas%5D%20Mag-Loop%20Antenna%20question.
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Mag-Loop%20Antenna%20question.
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmZ2FlYnJtBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0MjM1MzgyNzc-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/10868;_ylc=X3oDMTM3anBhcXZuBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDg3MQRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0MjM1MzgyNzcEdHBjSWQDMTA4Njg-
[6] http://groups.yahoo.com/group/loopantennas/links
[7] http://groups.yahoo.com/group/loopantennas/files
[8] http://ph.groups.yahoo.com/group/loopantennas/photos
[9]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmM3NvZWI4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0MjM1MzgyNzc-
[10]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnaG5zcmptBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDIzNTM4Mjc3
[11]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlNXBma2MzBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQyMzUzODI3Nw--
[12] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[13]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[14] https://info.yahoo.com/legal/us/yahoo/utos/terms/

10873. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-10 04:18:03 UTC
From: Craig F. Simmons
Topic: 10868 Message: 10873

I am sorry I am not sure what everybody is talking about. There is some kind of capacitor physically connected to the "gap" of the continuose loop so the capacitor becomes part of the antenna and circuit. As far as a "gap size", you can connect it directly to the outside of say a "5 inch butterfly capacitor" directly or with a wire or other conducting material. So you could have a "5 inch" gap or less according to which method of connection you use. I have used both and both work well. Maybe for some there needs to be better clarification as to what is the "Gap". Look at MFJ's loop they sell, the capacitor is welded directly to the loop so the capacitor width is the gap. This antenna works very well.

On Tue, Feb 10, 2015 at 7:08 AM, vk2tti@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> From Max, I've never made a magnetic loop with a "gap" in it. If you put a
> "gap" in a loop it becomes a folded dipole!! Unless you are talking about a
> "shielded " loop where the gap is in the shield around the loop element and
> is part and parcel of the design. Regards to all
>
>
> ----- Original Message -----
> From:
> loopantennas@yahoogroups.com
>
> To:
> <loopantennas@yahoogroups.com>
> Cc:
>
> Sent:
> Mon, 9 Feb 2015 22:17:14 -0500
> Subject:
> Re: [loopantennas] Mag-Loop Antenna question.
>
>
>
>
> This is mostly from my gut feeling and reasoning, but I present an
> opposing view. I would tend toward a wider gap rather than narrower. But
> there may be a lot of leeway.
>
> The ends make a small capacitor, which limits the minimum total
> capacitance and the maximum frequency to which it can be tuned. If you
> make the ends very close together, you increase that capacitance and lower

> the max. frequency and the total tunable frequency range.
>
> For a transmitting antenna, the ends have VERY high voltage so there is a
> voltage gradient across that gap. Too close, and it will arc.
>
> 25mm is an inch. It might have come from an American who used an inch as
> a round number, which got translated to Metric. What's the breakdown
> voltage of air? And how large a peak voltage do you have there?
>
> Performance-wise as an antenna, I suspect the gap doesn't make much
> difference. The high current in the loop follows around the loop and into
> the wires or straps that tap off to go to the tuning capacitor. Any loop
> material beyond those points doesn't carry the loop's high current; they
> just make a capacitor, in parallel with your tuning capacitor. They
> probably do not radiate anything significant.
>
> Andy
>
>
> ----------
> Email sent using Optus Webmail
>
>
>

10874. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-10 04:56:08 UTC
From: gnuarm.2007@...
Topic: 10868 Message: 10874

There are really two gaps in a magnetic loop. One is in the loop conductor which is the part of the circuit that develops the signal you will couple to your receiver. That gap is where the tuning capacitor is connected. But a magnetic loop has an electrostatic shield around the loop conductor. This shield also has a gap, usually at the opposite point in the loop from the gap in the loop conductor so that it can not develop currents to generate it's own magnetic field disrupting the utility of the antenna.

The gap in the shield is what is being discussed here. The capacitance across this gap will be very minute compared to the capacitance of the tuning circuit. Further it's impedance will be very large compared to the impedance of the rest of the shield. I can't say it is inconsequential. I can't however imagine a 1 inch gap will in any way have an impact on the operation of the antenna compared to a longer gap other than the possibility of arcing in a transmitting antenna perhaps.

In a transmitting antenna, does anyone know what potential might be developed across the gap in the shield? I know the loop capacitor can develop very large voltages due to the resonance. But will the shield develop similar voltages? I would think not. The loop has very large currents and the voltage is the counterpoint in the resonant circuit. The shield has very low current due to the very low capacitance across the gap and so I would think the voltage is similarly low.

Rick

10875. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-10 07:13:03 UTC
From: Maxwell Mclellan
Topic: 10868 Message: 10875

From Max again, There is no electrical gap in a tuned loop the gap is filled by a capacitor. A variable capacitor allows the resonant frequency of the combination to be varied. I think you are worrying about nothing. Capacitors are measured in Farads not inches. Make your loop as you are able and enjoy it. Again regards to all.

Sent from my iPad

> On 10 Feb 2015, at 15:18, "'Craig F. Simmons' k910dog@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> I am sorry I am not sure what everybody is talking about. There is some kind of capacitor physically connected to the "gap" of the continuose loop so the capacitor becomes part of the antenna and circuit. As far as a "gap size", you can connect it directly to the outside of say a "5 inch butterfly capacitor" directly or with a wire or other conducting material. So you could have a "5 inch" gap or less according to which method of connection you use. I have used both and both work well. Maybe for some there needs to be better clarification as to what is the "Gap". Look at MFJ's loop they sell, the capacitor is welded directly to the loop so the capacitor width is the gap. This antenna works very well.
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>> On Tue, Feb 10, 2015 at 7:08 AM, vk2tti@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
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>> From Max, I've never made a magnetic loop with a "gap" in it. If you put a "gap" in a loop it becomes a folded dipole!! Unless you are talking about a "shielded " loop where the gap is in the shield around the loop element and is part and parcel of the design. Regards to all
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>> ----- Original Message -----
>> From:
>> loopantennas@yahoogroups.com
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>> To:
>> <loopantennas@yahoogroups.com>
>> Cc:
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>> Sent:
>> Mon, 9 Feb 2015 22:17:14 -0500
>> Subject:
>> Re: [loopantennas] Mag-Loop Antenna question.
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>> This is mostly from my gut feeling and reasoning, but I present an opposing view. I

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>>
>> Andy
>>
>>
>> Email sent using Optus Webmail
>
>

10876. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-10 10:01:15 UTC
From: Maxwell Mclellan
Topic: 10868 Message: 10876

From Max again. the "gap" in a capacitor is actually filled with a dialectic material, eg air that gives the appearance of a gap, or other insulating materials. It's 9 at night here, I'm going to bed.

Sent from my iPad

> On 10 Feb 2015, at 15:56, "gnuarm.2007@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> There are really two gaps in a magnetic loop. One is in the loop conductor which is the part of the circuit that develops the signal you will couple to your receiver. That gap is where the tuning capacitor is connected. But a magnetic loop has an electrostatic shield around the loop conductor. This shield also has a gap, usually at the opposite point in the loop from the gap in the loop conductor so that it can not develop currents to generate it's own magnetic field disrupting the utility of the antenna.
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> The gap in the shield is what is being discussed here. The capacitance across this gap will be very minute compared to the capacitance of the tuning circuit. Further it's impedance will be very large compared to the impedance of the rest of the shield. I can't say it is inconsequential. I can't however imagine a 1 inch gap will in any way have an impact on the operation of the antenna compared to a longer gap other than the possibility of arcing in a transmitting antenna perhaps.
>
> In a transmitting antenna, does anyone know what potential might be developed across the gap in the shield? I know the loop capacitor can develop very large voltages due to the resonance. But will the shield develop similar voltages? I would think not. The loop has very large currents and the voltage is the counterpoint in the resonant circuit. The shield has very low current due to the very low capacitance across the gap and so I would think the voltage is similarly low.
>
> Rick
>
>

10877. Re: [loopantennas] Mag-Loop Antenna question.

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-11 14:49:24 UTC
From: Chris Trask
Topic: 10868 Message: 10877

>
>Hi All.....I have a question about a 1 meter, capacitor tuned mag-loop that I am building. So
>far, after a few trial sessions, it works very well. But, I have been reading many online
>articles from people who build these antennas. While reading these articles, I noticed that
>many people made the gap at the top of the antenna (where the tuning capacitor connects across)
>seem like a very big deal. Many of them quoted figures like 25 mm gap. My question is, does the
>size of the gap make a difference in the performance of the antenna? Thanks for any help you
>can give.
>

See my paper in the group files section about shielded loops. I have some discussion in there about the gap.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

10878. Pixel vs Flag or pennant

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-19 14:49:47 UTC
From: w3wh@...
Topic: 10878 Message: 10878

I have a Pixel loop which works fairly well. Has anyone compared this antenna with a flag or pennant for use on 160 meters. This season DX has been very difficult to copy and I'm wondering if I can improve things with a different antenna.

Bill/W3WH

10879. Re: [loopantennas] Pixel vs Flag or pennant

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-21 10:57:26 UTC
From: Andrew Ikin
Topic: 10878 Message: 10879

Bill W3WH wrote on Feb. 19.

Snip <I have a Pixel loop which works fairly well. Has anyone compared this antenna with a flag or pennant for use on 160 meters. This season DX has been very difficult to copy and I'm wondering if I can improve things with a different antenna>

Bill,
Providing you can erect a Flag or pennant away from local noise sources and conductive obstructions within the antennas near-field, then you should get improved reception compared to your current loop.
Points to consider:
Flags require good isolation from the feeder. Hence transformer coupling to the feeder or head amplifier is generally preferred. Commercial products like the Wellbrook FLG100LN uses transformer coupling.

Double KAZ Flags can provide excellent directivity; probably as good a 2 element Flag array. These antennas require a high gain low noise amplifier due to the inherent signal cancellation i.e. the antenna behaves like two end-fire antennas run in anti-phase so as to cancel out the high angle response of the loops.

Other options.

Run two loops as an end-fire array e.g. ALA100 or ALA1530 with a DXE NCC-1 noise canceller as the phase controller
Run two active whips (Clifton Labs) with the DXE NCC-1.

Or the above loops or whips with a twin antenna port SDR that provides antenna phasing.

Note: the DXE NCC-1 can provide the active antenna dc power. So the Antenna Interface/power injectors are not required.

73

Andrew Ikin

Wales UK

10880. Re: Pixel vs Flag or pennant

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-25 04:38:55 UTC
From: 3ym3ym@...
Topic: 10878 Message: 10880

Hi Bill,

The answer is "maybe" and depends on your local noise situation.
People usually buy small loop antennas because they have a deep null and can be rotated to minimize the local noise pickup.
If there is low noise in your neighborhood, than a bigger passive antenna will outperform a small active loop because it has no internal noise source (amplifier).

73, Mike

10881. Re: [loopantennas] Schematic wanted to repair C Crane antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-02-25 15:53:38 UTC
From: tpagotie@...
Topic: 10864 Message: 10881

Thanks for the reply. The block diagram and schematic will be helpful.

tom

10882. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-01 14:18:08 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10882

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10883. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-01 14:18:08 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10883

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10884. Wellbrook or AOR-like wideband RX loop using pre-made circuits

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-05 00:37:56 UTC
From: pu3hag.l@...
Topic: 10884 Message: 10884

Hi,

Would it be possible to construct a small broadband loop (1 meter / 3 ft diameter) with performance similar to Wellbrook and AOR using pre-built modules?

What would be your insights?

I'm thinking specifically on using some of the preamps available at
Clifton Laboratories (listed here http://www.cliftonlaboratories.com/current_products.htm
http://www.cliftonlaboratories.com/current_products.htm) PA0RDT mini-whip circuit
(there's a kit on ebay if you search for "activate antenna" [sic]).
KitsNParts RF Amp http://www.kitsandparts.com/rfamp1.3.php
http://www.kitsandparts.com/rfamp1.3.php

This is not an original idea at all...

Mark WA1ION shared some ideas recently here:
http://www.qsl.net/wa1ion/loop/car_roof_loop.htm
http://www.qsl.net/wa1ion/loop/car_roof_loop.htm

Steve VE7SL compiled a couple of ideas (using Wellbrook parts or the PA0RDT circuit with and step-up performance, apud Aldo Moroni)
http://ve7sl.blogspot.com.br/2014/07/wellbrook-loop-plans.html
http://ve7sl.blogspot.com.br/2014/07/wellbrook-loop-plans.html

All inputs are welcome :)

Thanks!

pu3hag huelbe

10885. Re: Wellbrook or AOR-like wideband RX loop using pre-made circuits

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-05 14:02:10 UTC
From: gregella53@...
Topic: 10884 Message: 10885

Clifton Laboratories developed the amplifier for the Pixel Technologies RF Pro shielded loop antenna, and they respond promptly to email questions.

10886. Re: [loopantennas] Wellbrook or AOR-like wideband RX loop using pre-made circuits

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-05 14:51:49 UTC
From: PU3HAG amateur radio ham operator
Topic: 10884 Message: 10886

That's very nice. Thank you!

On Thursday, March 5, 2015, gregella53@gmail.com [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Clifton Laboratories developed the amplifier for the Pixel Technologies RF
> Pro shielded loop antenna, and they respond promptly to email questions.
>
>

10887. MFJ Loop fast tuning, maybe too fast?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-10 17:17:57 UTC
From: lavoiejoseph@...
Topic: 10887 Message: 10887

Hello to the group.

I happened to pick up a MFJ-1786 at a local hamfest, I always wanted to try this loop and it just happened that there was one for sale!

My question is about the fast tuning, it seems so fast that by the time the motor slows and stops it has greatly bypassed the resonant frequency and takes a long time, using slow tuning, to go back and get the dip.

For example, going from 18 MHz to 14 MHz the fast tuning takes about 3-4 seconds the controller notes the dip, then slows and stops the motor. I then measure the frequency, using an MFJ tuner, and find that the current dip is around 12.8 MHz. It takes a long time using slow tune, about 30+ seconds to move back up to 14 MHz.

I have more examples, but this happens consistently. Kind of greatly overshooting the resonant frequency and requiring 30+ seconds to go back to get the "dip".

My question is if this is normal or is my fast tuning, too fast? I wish fast tuning went a little slower but I can't find a way to reduce the speed. I know slow tuning is adjustable.

Thanks,
Joe/AB7DP

10888. Re: [loopantennas] MFJ Loop fast tuning, maybe too fast?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-10 18:53:43 UTC
From: Robert Cavanaugh
Topic: 10887 Message: 10888
Attachments: 1 described; binary payloads are missing from this source WARC

Hi Joe,Download the manual from the MFJ website. They mention one adjustment possible in the control box that might be applicable:

I don't know if this will help or not but you could try it I would also open a customer support ticket with MFJ and see if they have any info. It takes a couple of days for them to get back to your but I have always received a good response from them with questions about their products. You could also check the Web for other info, I know that lots of people have opened the hood, and I think the controller schematic might be out there as well.

73,Bob Cavanaugh - AG6YK.

On Tuesday, March 10, 2015 11:03 AM, "lavoiejoseph@hotmail.com [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  Hello to the group.
I happened to pick up a MFJ-1786 at a local hamfest, I always wanted to try this loop and it just happened that there was one for sale!
My question is about the fast tuning, it seems so fast that by the time the motor slows and stops it has greatly bypassed the resonant frequency and takes a long time, using slow tuning, to go back and get the dip.
For example, going from 18 MHz to 14 MHz the fast tuning takes about 3-4 seconds the controller notes the dip, then slows and stops the motor. I then measure the frequency, using an MFJ tuner, and find that the current dip is around 12.8 MHz. It takes a long time using slow tune, about 30+ seconds to move back up to 14 MHz.
I have more examples, but this happens consistently. Kind of greatly overshooting the resonant frequency and requiring 30+ seconds to go back to get the "dip".
My question is if this is normal or is my fast tuning, too fast? I wish fast tuning went a little slower but I can't find a way to reduce the speed. I know slow tuning is adjustable.
Thanks,Joe/AB7DP

10889. Re: [loopantennas] MFJ Loop fast tuning, maybe too fast? [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-10 19:19:30 UTC
From: Robert Cavanaugh
Topic: 10887 Message: 10889

Yahoo swallowed my paste...
Paraphrasing: Open the controller cover, locate R26. Holding down one of the Fine tune knobs, adjust R26 until the LED pulses faster. Test tuning across all the bands. Replace the cover
Bob AG6YK

On Tuesday, March 10, 2015 12:08 PM, "Robert Cavanaugh osianfion@verizon.net [loopantennas]" <loopantennas@yahoogroups.com> wrote:

[Attachment(s) from Robert Cavanaugh included below] Hi Joe,Download the manual from the MFJ website. They mention one adjustment possible in the control box that might be applicable:

I don't know if this will help or not but you could try it I would also open a customer support ticket with MFJ and see if they have any info. It takes a couple of days for them to get back to your but I have always received a good response from them with questions about their products. You could also check the Web for other info, I know that lots of people have opened the hood, and I think the controller schematic might be out there as well.

73,Bob Cavanaugh - AG6YK.

On Tuesday, March 10, 2015 11:03 AM, "lavoiejoseph@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Hello to the group.
I happened to pick up a MFJ-1786 at a local hamfest, I always wanted to try this loop and it just happened that there was one for sale!
My question is about the fast tuning, it seems so fast that by the time the motor slows and stops it has greatly bypassed the resonant frequency and takes a long time, using slow tuning, to go back and get the dip.
For example, going from 18 MHz to 14 MHz the fast tuning takes about 3-4 seconds the controller notes the dip, then slows and stops the motor. I then measure the frequency, using an MFJ tuner, and find that the current dip is around 12.8 MHz. It takes a long time using slow tune, about 30+ seconds to move back up to 14 MHz.
I have more examples, but this happens consistently. Kind of greatly overshooting the resonant frequency and requiring 30+ seconds to go back to get the "dip".
My question is if this is normal or is my fast tuning, too fast? I wish fast tuning went a little slower but I can't find a way to reduce the speed. I know slow tuning is adjustable.
Thanks,Joe/AB7DP

10890. Re: MFJ Loop fast tuning, maybe too fast?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-13 21:42:34 UTC
From: rmckee1957@...
Topic: 10887 Message: 10890

My question is if this is normal or is my fast tuning, too fast? I wish fast tuning went a little slower but I can't find a way to reduce the speed. I know slow tuning is adjustable. <snip>

Reduce the voltage supplied to the motor on fast tune a bit. I'm not familiar with the control circuit for that antenna, but I would check the output voltage when in high and then check to see if it is adjustable and turn it down some. But this may slow the slow speed down too. You could also use an antenna analyzer to watch the swr as it nears the frequency you want and then switch to slow speed right before it gets there. Just a thought.

KC8AON

10891. Re: MFJ Loop fast tuning, maybe too fast?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-15 08:27:07 UTC
From: sp2bpd@...
Topic: 10887 Message: 10891

.

Joe,

if you need schematic of the controler you may find it if Files section of MFJLoops group on yahoo.

There is also VK2XV file on Control Box measurements. Maybe this will shed some light.

Also searching messages in that group or asking members there.

Regards

Piotr, SP2BPD

-

10892. Mag-Loop Question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-17 00:49:27 UTC
From: nick.nickrumple@...
Topic: 10892 Message: 10892

Hi All.....I am thinking of converting my indoor capacitor tuned mag-loop antenna to a voltage/varactor tuned outdoors antenna. Does anyone know of a good circuit schematic for this? Thanks for any help.

Nick Rumple
Kannapolis, North Carolina

10893. Re: [loopantennas] Mag-Loop Question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-17 01:02:14 UTC
From: Richard (Rick) Karlquist
Topic: 10892 Message: 10893

See:

http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

Currently, I have run out of PC boards for this. I might
make more in the near future. I also have fully assembled
circuits for $175 plus shipping.

Rick N6RK

On 3/16/2015 5:49 PM, nick.nickrumple@... [loopantennas] wrote:
> Hi All.....I am thinking of converting my indoor capacitor tuned
> mag-loop antenna to a voltage/varactor tuned outdoors antenna. Does
> anyone know of a good circuit schematic for this? Thanks for any help.
>
>
>
> Nick Rumple
>
> Kannapolis, North Carolina
>
>

10894. Re: Mag-Loop Question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-17 04:59:22 UTC
From: qrp.gaijin@...
Topic: 10892 Message: 10894

Hi,

Here's a really simple varactor-tuned loop circuit that I've used for shortwave. The varactor I used is a 1SV149 AM BCB varactor. Note there is a missing resistor in the schematic.

http://theradioboard.com/rb/viewtopic.php?p=34937#p34937
http://theradioboard.com/rb/viewtopic.php?p=34937#p34937

The missing resistor must be inserted between C1 and the anode of the varactor. In other words, both ends of the varactor must go through 100k ohm resistors to the control cable, to reduce susceptibility of the circuit to noise on the control cable. This is explained here: http://theradioboard.com/rb/viewtopic.php?p=34941#p34941
http://theradioboard.com/rb/viewtopic.php?p=34941#p34941 and
http://theradioboard.com/rb/viewtopic.php?p=35092#p35092
http://theradioboard.com/rb/viewtopic.php?p=35092#p35092 .

I'm not saying this is a high-performance circuit, but it's a very simple one that's worked for me.

Best regards,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com/

10895. pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-25 22:39:35 UTC
From: dannibou@...
Topic: 10895 Message: 10895

Hi. I just built a 48'' box loop with one turn for the pick-up. It work great but I wonder what would happens if I add one or several more turns for the pick-up wire. Would the result be better or just one turn is sufficient? Thanks
Danny

10896. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-25 23:47:46 UTC
From: BobC
Topic: 10895 Message: 10896

The pickup coil should match the input impedance of the radio. That varies with frequency. I have resonant loops with pickup coils covering LW, MW and SW. The SW loops cover a wide range of frequencies. I have multi-turn pickup coils on these with rotary switches to control the number of turns, depending on the frequency. It makes a big difference.

You may also find that the input impedance varies from one radio to another, resulting in slightly different input coil turns.

For LW and MW, the frequency range is generally much smaller and you can usually get away with a fixed number of turns in the pickup coil. That number is most easily found by experimentation.

Bottom line: experiment. Besides varying the number of turns, vary the diameter of the pickup coil. A pickup coil which is too close to the primary coil will tend to interfere with the resonance and Q of the primary circuit. The AN-200 desk-top loop is an example of this. It has a 2-turn pickup coil wound right under the primary coil, which is too close. This antenna is best used when inductively coupled to the radio's ferrite loop.

Hope that helps.

Regards,

Bob in MD

On 3/25/2015 6:39 PM, dannibou@... [loopantennas] wrote:
>
> Hi. I just built a 48'' box loop with one turn for the pick-up. It
> work great but I wonder what would happens if I add one or several
> more turns for the pick-up wire. Would the result be better or just
> one turn is sufficient? Thanks
>
> Danny
>
>

10897. Re: pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-25 23:50:18 UTC
From: lpwjy@...
Topic: 10895 Message: 10897

Go to Missouri S&T http://emclab.mst.edu/inductance/index.html

http://emclab.mst.edu/inductance/index.html

Missouri S&T http://emclab.mst.edu/inductance/index.html Inductance Calculations Select the box with the geometry that you would like to calculate. The round-wire geometries are loops of wire with various shapes.

View on emclab.mst.edu http://emclab.mst.edu/inductance/index.html
Preview by Yahoo

and enter n=1, w=48 inches(be sure to select inches). Enter "a" based on the diameter of the wire you used. Enter Ur =1 and you will see a value of inductance. You can then calculate inductive reactance at the frequencies you expect to receive. If your new loop is connected to a receiver with a 50 Ohm antenna input you have some idea of how much mismatch there is. Bill Young WD5HOH

10898. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-26 02:40:38 UTC
From: vk2tti@...
Topic: 10895 Message: 10898

Danny, It is possable to tune the pickup loop with a capacitor in series with the pickup loop, easier than using selectable multi turn pickup loop. Regards vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
25 Mar 2015 15:39:35 -0700
Subject:
[loopantennas] pick-up loop question

Hi. I just built a 48'' box loop with one turn for the pick-up. It work great but I wonder what would happens if I add one or several more turns for the pick-up wire. Would the result be better or just one turn is sufficient? Thanks

Danny

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/10895;_ylc=X3oDMTJyZDI5dnYxBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDg5NQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0MjczMjMxNzY-?act=reply&messageNum=10895
[2] mailto:dannibou@...?subject=Re%3A%20pick-up%20loop%20question
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20pick-up%20loop%20question
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmaW5ncWZlBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0MjczMjMxNzY-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/10895;_ylc=X3oDMTM3OHZrZnZ0BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMDg5NQRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0MjczMjMxNzYEdHBjSWQDMTA4OTU-
[6] http://groups.yahoo.com/group/loopantennas/links
[7] http://groups.yahoo.com/group/loopantennas/files
[8] http://ph.groups.yahoo.com/group/loopantennas/photos

[9]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmNmJnZHFwBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0MjczMjMxNzY-
[10]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJna2Z1ODhqBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDI3MzIzMTc2
[11]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlYnExM3Q1BF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQyNzMyMzE3Ng--
[12] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[13]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[14] https://info.yahoo.com/legal/us/yahoo/utos/terms/

10899. Re: pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-26 10:58:40 UTC
From: tenorman1952@...
Topic: 10895 Message: 10899

Easy answer, one turn pickup loop, approximately half the diameter of the main loop.

Don't overthink this. It will work fine.

73,
Paul - AE5JU

10900. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-26 12:12:40 UTC
From: Dexter
Topic: 10895 Message: 10900

On 3/25/2015 10:40 PM, vk2tti@... [loopantennas] wrote:
>
> Danny, It is possable to tune the pickup loop with a capacitor in
> series with the pickup loop, easier than using selectable multi turn
> pickup loop. Regards vk2tti.
>
>
Not sure I understand what's recommended here. I've assumed that the "pickup loop" refers to a secondary coil inductively coupled to a primary, resonant L/C circuit. A cap in series with a "pickup" coil would create a second high-impedance circuit, resonant at some frequency, which then must feed the receiver over a low-impedance transmission line (lead-in). What am I missing?

Bob

10901. Re: [loopantennas] Re: pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-26 16:38:36 UTC
From: Steve
Topic: 10895 Message: 10901

I've built several air core loops over the years and always with a one-turn pick-up loop. I think making the pick-up loop any larger will just tend to bog-down the overall Q of the main loop and probably degrade the impedance match to the receiver...nothing to be gained. If you do try it, please let us know what you learn.

Incidently...one time I did try feeding the one turn loop via a fixed mica cap (can't recall the value but probably in the 300 pf range) and it sharpened up the bandwidth of the main loop considerably...it required 're-peaking' more often. I assumed that the 'unloading' of the one turn pick-up loop made a significant increase in the main loop's Q.

Steve / 73

> Easy answer, one turn pickup loop...

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

VE7SL BLOG - "Homebrewing and Operating Adventures From 2200m to Nanowaves": http://ve7sl.blogspot.ca/

10902. Re: [loopantennas] Re: pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-26 20:08:58 UTC
From: Bob C
Topic: 10895 Message: 10902

On 3/26/2015 12:38 PM, 'Steve' ve7sl@... [loopantennas] wrote:
>
> I've built several air core loops over the years and always with a
> one-turn
> pick-up loop. I think making the pick-up loop any larger will just
> tend to
> bog-down the overall Q of the main loop and probably degrade the
> impedance
> match to the receiver...nothing to be gained. If you do try it, please
> let
> us know what you learn.
>
You're quite right. Overcoupling will load the primary circuit and lower the Q. That's certainly the case with the AN-200, which I cited earlier. That said, you can still reduce the size (diameter) of the pickup coil relative to that of the primary coil and increase its number of turns in order to provide an impedance match to the receiver. You won't lose any Q doing this. This unloads the primary resonant circuit, and allows it to more or less "freewheel" in space. There is probably a "sweet spot" for the pickup coil - a project for another day.

SW loops, which tend to cover a larger frequency range, have a larger impedance matching problem across their band. For these, I use small-diameter pickup coils having 6 to 12 tapped turns. Addition or deletion of just one turn via a rotary switch has a dramatic effect on output and does not reduce the Q.

I am using a fixed, 3-turn, 8-inch diameter, shielded pickup coil on my LW loop, which I estimate to have a bandwidth of 1 kHz and requires retuning at that frequency interval. The same pickup on MW, probably has a bandwidth of 5 to 10 kH. For my SW loops, I would estimate the bandwidth to be about 100 to 200 kHz at frequencies around 15 MHz.

The proof is in the pudding. They are all microvolt sniffers.

Bob

10903. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 04:45:31 UTC
From: Maxwell Mclellan
Topic: 10895 Message: 10903

Dexter, A loop, tuned by a capacitor in parallel forms a high impedance circuit at resonance. However, a loop tuned by a series capacitor presents a low impedance at resonance.
Regards Max vk2tti

Sent from my iPad

> On 26 Mar 2015, at 23:12, "Dexter dexterdxer@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>> On 3/25/2015 10:40 PM, vk2tti@optusnet.com.au [loopantennas] wrote:
>>
>> Danny, It is possable to tune the pickup loop with a capacitor in series with the pickup loop, easier than using selectable multi turn pickup loop. Regards vk2tti.
> Not sure I understand what's recommended here. I've assumed that the "pickup loop" refers to a secondary coil inductively coupled to a primary, resonant L/C circuit. A cap in series with a "pickup" coil would create a second high-impedance circuit, resonant at some frequency, which then must feed the receiver over a low-impedance transmission line (lead-in). What am I missing?
>
> Bob
>

10904. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 04:55:42 UTC
From: Maxwell Mclellan
Topic: 10895 Message: 10904

Dexter, The main loop is parallel tuned by a capacitor and presents as high impedance. The secondary or pickup loop needs to be series tuned and presents as a low impedance to thr receiver input. Regards Max.

Sent from my iPad

> On 26 Mar 2015, at 23:12, "Dexter dexterdxer@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>> On 3/25/2015 10:40 PM, vk2tti@... [loopantennas] wrote:
>>
>> Danny, It is possable to tune the pickup loop with a capacitor in series with the pickup loop, easier than using selectable multi turn pickup loop. Regards vk2tti.
> Not sure I understand what's recommended here. I've assumed that the "pickup loop" refers to a secondary coil inductively coupled to a primary, resonant L/C circuit. A cap in series with a "pickup" coil would create a second high-impedance circuit, resonant at some frequency, which then must feed the receiver over a low-impedance transmission line (lead-in). What am I missing?
>
> Bob
>

10905. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 04:51:38 UTC
From: Maxwell Mclellan
Topic: 10895 Message: 10905

Dexter, sorry mate, yes I refer to the secondary loop as the pickup loop. The primary (big loop) is parallel tuned by a capacitor (high impedance). The secondary (pickup loop) needs to be series tuned to present a low impedance path to the receiver input. Regards againMax.

Sent from my iPad

> On 26 Mar 2015, at 23:12, "Dexter dexterdxer@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>> On 3/25/2015 10:40 PM, vk2tti@optusnet.com.au [loopantennas] wrote:
>>
>> Danny, It is possable to tune the pickup loop with a capacitor in series with the pickup loop, easier than using selectable multi turn pickup loop. Regards vk2tti.
> Not sure I understand what's recommended here. I've assumed that the "pickup loop" refers to a secondary coil inductively coupled to a primary, resonant L/C circuit. A cap in series with a "pickup" coil would create a second high-impedance circuit, resonant at some frequency, which then must feed the receiver over a low-impedance transmission line (lead-in). What am I missing?
>
> Bob
>

10906. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 05:01:18 UTC
From: Maxwell Mclellan
Topic: 10895 Message: 10906

Dexter, both capacitors need to be variables. Both affect the tuning and be adjusted to best peak.I should think before I write. Max.

Sent from my iPad

> On 27 Mar 2015, at 15:55, "Maxwell Mclellan vk2tti@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Dexter, The main loop is parallel tuned by a capacitor and presents as high impedance. The secondary or pickup loop needs to be series tuned and presents as a low impedance to thr receiver input. Regards Max.
>
> Sent from my iPad
>
>> On 26 Mar 2015, at 23:12, "Dexter dexterdxer@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>>
>>
>>> On 3/25/2015 10:40 PM, vk2tti@optusnet.com.au [loopantennas] wrote:
>>>
>>> Danny, It is possable to tune the pickup loop with a capacitor in series with the pickup loop, easier than using selectable multi turn pickup loop. Regards vk2tti.
>> Not sure I understand what's recommended here. I've assumed that the "pickup loop" refers to a secondary coil inductively coupled to a primary, resonant L/C circuit. A cap in series with a "pickup" coil would create a second high-impedance circuit, resonant at some frequency, which then must feed the receiver over a low-impedance transmission line (lead-in). What am I missing?
>>
>> Bob
>
>

10907. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 11:53:01 UTC
From: Dexter
Topic: 10895 Message: 10907

Me too. I should have given it more thought. You are correct. The series circuit is at low impedance at resonance. When I saw the 300 pf cap in the posting, I just assumed it was fixed and would only resonate at one frequency. There is still a problem however with the lead-in. It would constitute some load as a third component in series with the coil and variable cap. I suppose the ultimate Q would still be provided by the primary circuit. Anyway, it is an interesting concept, which had not occurred to me, and I ought to give it a try.

Bob

On 3/27/2015 1:01 AM, Maxwell Mclellan vk2tti@...
[loopantennas] wrote:
> Dexter, both capacitors need to be variables. Both affect the tuning
> and be adjusted to best peak.I should think before I write. Max.
>
> Sent from my iPad
>
> On 27 Mar 2015, at 15:55, "Maxwell Mclellan vk2tti@...
> <mailto:vk2tti@...> [loopantennas]"
> <loopantennas@yahoogroups.com <mailto:loopantennas@yahoogroups.com>>
> wrote:
>
>> Dexter, The main loop is parallel tuned by a capacitor and presents
>> as high impedance. The secondary or pickup loop needs to be series
>> tuned and presents as a low impedance to thr receiver input. Regards Max.
>>
>> Sent from my iPad
>>
>> On 26 Mar 2015, at 23:12, "Dexter dexterdxer@...
>> <mailto:dexterdxer@...> [loopantennas]"
>> <loopantennas@yahoogroups.com <mailto:loopantennas@yahoogroups.com>>
>> wrote:
>>
>>> On 3/25/2015 10:40 PM, vk2tti@... [loopantennas] wrote:
>>>>
>>>> Danny, It is possable to tune the pickup loop with a capacitor in
>>>> series with the pickup loop, easier than using selectable multi
>>>> turn pickup loop. Regards vk2tti.
>>>>
>>>>
>>> Not sure I understand what's recommended here. I've assumed that the
>>> "pickup loop" refers to a secondary coil inductively coupled to a
>>> primary, resonant L/C circuit. A cap in series with a "pickup" coil
>>> would create a second high-impedance circuit, resonant at some

```
>>> frequency, which then must feed the receiver over a low-impedance
>>> transmission line (lead-in). What am I missing?
>>>
>>> Bob
>
```

10908. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 17:28:55 UTC
From: gnuarm.2007@...
Topic: 10895 Message: 10908

I don't have a lot of experience with these circuits, but one thing I know is that any part of it can spoil the Q factor. The part where you say, "I suppose the ultimate Q would still be provided by the primary circuit." is not really the right way to look at it. Q is not a quantity that is "provide" like capacitance. It is more the opposite a property that measures the losses and losses nearly anywhere in the circuit will negatively impact the Q.

Rick

10909. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 19:57:09 UTC
From: Dexter
Topic: 10895 Message: 10909

I don't mean to steer this away from a Q discussion, but thinking about it, caused my memory to kick in. A while back I tried to get two resonant circuits to support one another. I used two SW loops of the same size and brought them into near-field proximity to one another along the coaxial line. One loop was connected to the receiver with a low-impedance coupling coil. As the second loop was brought closer it produced a null signal. I reasoned that this was because the instantaneous polarities of their fields were 180 degrees out of phase. Apparently some folks have gotten this to work by using a relatively small diameter resonant pickup coil positioned coaxially and coplanar with the primary coil.

I do have a MW contraption I built several years ago. It consists of a resonant air-core loop and an active ferrite, balanced loop operating coaxially about the air-core's diameter distance away. The field of the air core loop dominates that of the ferrite core. The ferrite core is set to resonance, then the air core can be tuned to produce very sharp peaks and nulls.

Bob

On 3/27/2015 1:28 PM, gnuarm.2007@... [loopantennas] wrote:
>
> I don't have a lot of experience with these circuits, but one thing I
> know is that any part of it can spoil the Q factor. The part where
> you say, "I suppose the ultimate Q would still be provided by the
> primary circuit." is not really the right way to look at it. Q is not
> a quantity that is "provide" like capacitance. It is more the
> opposite a property that measures the losses and losses nearly
> anywhere in the circuit will negatively impact the Q.
>
> Rick
>
>

10910. Re: [loopantennas] Re: pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-27 22:54:34 UTC
From: dannibou@...
Topic: 10895 Message: 10910

Very interesting discussion. I had not thought a simple question would have brought so many answers. Anyway I'll do some test later and give you my results here on the group. It's easy to add or remove turns on my comb loop, as I named it.
Danny

10911. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-28 08:01:58 UTC
From: Maxwell Mclellan
Topic: 10895 Message: 10911

Dexter, Two things.
Question. A well constructed, parallel tuned loop exhibits a high Q. What Q does a well constructed series tuned loop exhibit?
An observation. I made a two turn 6 metre x 2 metre parallel tuned loop hung under the eaves of my garage. The loop ran north/south with its nulls to the east/west. If the loop was tuned to MW station to the west and and a transistor radio tuned to that station was west of the big loop reception on the radio was good. However, if the radio was taken to the eastern side of the big loop the signal from the western station was completely blocked. It was as though the big loop was placing that signal in a bottomless null. Much work has been done using one loop, not much info is available on loops taken more than one at a time. Regards all Max.
Sent from my iPad
> On 28 Mar 2015, at 6:57, "Dexter dexterdxer@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> I don't mean to steer this away from a Q discussion, but thinking about it, caused my memory to kick in. A while back I tried to get two resonant circuits to support one another. I used two SW loops of the same size and brought them into near-field proximity to one another along the coaxial line. One loop was connected to the receiver with a low-impedance coupling coil. As the second loop was brought closer it produced a null signal. I reasoned that this was because the instantaneous polarities of their fields were 180 degrees out of phase. Apparently some folks have gotten this to work by using a relatively small diameter resonant pickup coil positioned coaxially and coplanar with the primary coil.
>
> I do have a MW contraption I built several years ago. It consists of a resonant air-core loop and an active ferrite, balanced loop operating coaxially about the air-core's diameter distance away. The field of the air core loop dominates that of the ferrite core. The ferrite core is set to resonance, then the air core can be tuned to produce very sharp peaks and nulls.
>
> Bob
>
>> On 3/27/2015 1:28 PM, gnuarm.2007@... [loopantennas] wrote:
>>
>> I don't have a lot of experience with these circuits, but one thing I know is that any part of it can spoil the Q factor. The part where you say, "I suppose the ultimate Q would still be provided by the primary circuit." is not really the right way to look at it. Q is not a quantity that is "provide" like capacitance. It is more the opposite a property that measures the losses and losses nearly anywhere in the circuit will negatively impact the Q.
>>
>> Rick
>>
>
>

10912. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-28 13:05:53 UTC
From: Dexter
Topic: 10895 Message: 10912

On 3/28/2015 4:01 AM, Maxwell Mclellan vk2tti@...
[loopantennas] wrote:
> Dexter, Two things.
> Question. A well constructed, parallel tuned loop exhibits a high Q.
> What Q does a well constructed series tuned loop exhibit?

Maxwell,

Current flow within parallel- and series-resonant circuits is really the same. At some resonant frequency, inductive and capacitive reactances cancel and current flow is only limited by pure resistance in the circuit. If the resistance is low, the circuit's "figure of merit," or Q is high. For a loop antenna, that equates to a sharp gain in signal strength around the resonant frequency.

The parallel or series circuit refers to the way the tuned circuit is connected to a useful load. For a parallel circuit, the load is connected to the outside of the tuned circuit, one lead at one connection of the coil and capacitor and the remaining lead to the other connection of the coil and capacitor. When the circuit is at resonance, it presents a very high impedance across the load; and when not at resonance, a low impedance. The load may have an incoming signal attached to it and the parallel-tuned circuit acts as a gate or switch to pass (high impedance across the load) or shunt (low impedance across the load) the signal.

In the case of the series-resonant loop antenna, the circuit between the coil and capacitor is broken and the load (lead-in to the receiver) is inserted between them. At resonance the amount of resistance in the circuit is higher than it would be with just the coil and capacitor forming the circuit. Consequently, the Q would not be as high.

In the case of a loop antenna having a "free wheeling" tuned circuit coupled to the receiver with a separate pickup coil, it should not be viewed as either a parallel- or series-coupled circuit, but rather transformer coupled. There is still a load on the tuned circuit, and thus an effect on the Q. This is determined by the degree of coupling between the primary and secondary coils.

Hope this helps some. I will try to get to your observation later on.

Regards,

Bob

10913. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-28 16:53:30 UTC
From: xe2ej@...
Topic: 10895 Message: 10913

Hi Bob: the easy way to undestand is to think like two resonant coils forming a transformer.
the capacitor and coil are a paralell tuned circuit. it exibit the quality to respond to the tuned
freq. (more sensitive at res freq.) and the pickup loop is to match the impedance btwn radio, transmission line and the antena. thats why is only one turn o may be part o a turn. this not necesarilly match impedances but
you can improve the system with a capacitor in serie with the pickup loop to help in the matching process.
Paralell circuits is a high impedance and series is low impedance. this is a elementary explanation.
try to get a good electronics theory book to gain akcnoledge in this topic.

For reception only, the thumb rule is abt 3 to 5 % of paralell number turns. if there are a few turns maybe
one o half turn will suffice.

xe2ej Fernando

10914. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-28 17:54:49 UTC
From: Dexter
Topic: 10895 Message: 10914

Fernando,

Thought that's what I said.

And I do have a shelf full of well used theory books.

Bob

On 3/28/2015 12:53 PM, xe2ej@... [loopantennas] wrote:
>
> Hi Bob: the easy way to undestand is to think like two resonant coils
> forming a transformer.
> the capacitor and coil are a paralell tuned circuit. it exibit the
> quality to respond to the tuned
> freq. (more sensitive at res freq.) and the pickup loop is to match
> the impedance btwn radio, transmission line and the antena. thats why
> is only one turn o may be part o a turn. this not necesarilly match
> impedances but
> you can improve the system with a capacitor in serie with the pickup
> loop to help in the matching process.
> Paralell circuits is a high impedance and series is low impedance.
> this is a elementary explanation.
> try to get a good electronics theory book to gain akcnoledge in this
> topic.
>
> For reception only, the thumb rule is abt 3 to 5 % of paralell
> number turns. if there are a few turns maybe
> one o half turn will suffice.
>
> xe2ej Fernando
>
>

10915. pick-up loop question updated

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-28 19:31:05 UTC
From: dannibou@...
Topic: 10915 Message: 10915

I uploaded a photo of my loop with the green wire pick-up loop. This is what give me the best signal vs Q. It's a two turn pick-up. Originally, the pick-up loop was close to the main winding. The result is higher Q with the smaller pick-up loop for almost the same signal on my kenwood R-2000. I'll try to upload another photo of my loop with the pick-up loop before the mod.
Danny

10916. Re: [loopantennas] pick-up loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-29 05:26:37 UTC
From: Maxwell Mclellan
Topic: 10895 Message: 10916

Bob, thanks for the theory.I tend not to use a pickup loop but prefer a capacitor to tune the main loop and use a capacitive division setup for matching. The type of setup as used in the MFJ -936B loop tuner but with just two variable capacitors and none of the bells and whistles of the MFJ. Regards to all Max vk2tti.

Sent from my iPad

> On 29 Mar 2015, at 0:05, "Dexter dexterdxer@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>> On 3/28/2015 4:01 AM, Maxwell Mclellan vk2tti@... [loopantennas] wrote:
>>
>> Dexter, Two things.
>> Question. A well constructed, parallel tuned loop exhibits a high Q. What Q does a well constructed series tuned loop exhibit?
>
> Maxwell,
>
> Current flow within parallel- and series-resonant circuits is really the same. At some resonant frequency, inductive and capacitive reactances cancel and current flow is only limited by pure resistance in the circuit. If the resistance is low, the circuit's "figure of merit," or Q is high. For a loop antenna, that equates to a sharp gain in signal strength around the resonant frequency.
>
> The parallel or series circuit refers to the way the tuned circuit is connected to a useful load. For a parallel circuit, the load is connected to the outside of the tuned circuit, one lead at one connection of the coil and capacitor and the remaining lead to the other connection of the coil and capacitor. When the circuit is at resonance, it presents a very high impedance across the load; and when not at resonance, a low impedance. The load may have an incoming signal attached to it and the parallel-tuned circuit acts as a gate or switch to pass (high impedance across the load) or shunt (low impedance across the load) the signal.
>
> In the case of the series-resonant loop antenna, the circuit between the coil and capacitor is broken and the load (lead-in to the receiver) is inserted between them. At resonance the amount of resistance in the circuit is higher than it would be with just the coil and capacitor forming the circuit. Consequently, the Q would not be as high.
>
> In the case of a loop antenna having a "free wheeling" tuned circuit coupled to the receiver with a separate pickup coil, it should not be viewed as either a parallel- or series-coupled circuit, but rather transformer coupled. There is still a load on the tuned circuit, and thus an effect on the Q. This is determined by the degree of coupling between the primary and secondary coils.
>
> Hope this helps some. I will try to get to your observation later on.

>
> Regards,
>
> Bob
>

10917. dielectric question

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-29 08:57:14 UTC
From: dx11
Topic: 10917 Message: 10917

Hello all,

At last I have started the design of the transmitting magnetic loop I want to build. Most of the design choices still have to be made, like dimensions, loop material and construction.

But I intend to make the adjustable capacitor myself. This to avoid the variable air capacitors or vacuum capacitors that are hard to find or expensive and do not have the right capacity range.

I want to be able to have control over specifications like capacity range, voltage rating and dimensions. A few concepts have arisen from my search to solutions.

I am thinking of using a dielectric between the capacitor surfaces, (a) for increasing the capacity for a given surface area because of the relative permeability an (b) for increasing the voltage rating.

But I need to avoid the risk of introducing losses and of heating the dielectric.

What physical property of the dielectric should I look for? Could anyone point me in the right direction?

Or can I find a list of materials I could use for this dielectric ?

I hope you can help.

Cor PA4Q

10918. OT: Loopant group to gmail = spam?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-29 10:23:31 UTC
From: Adrian Flynn
Topic: 10918 Message: 10918

Does anyone have an idea why gmail AUTOMATICALLY sends group mail to spam folder?

I had to create a filter so that all loopantennas mail was not in spam folder, with that filter I get the mail in my inbox but with a bright yellow box notice "THIS WAS NOT SENT TO SPAM DUE TO A FILTER YOU CREATED! Please visit your filters."

Any ideas welcome.

Adrian KF7DYU

10919. Re: OT: Loopant group to gmail = spam?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-29 17:33:00 UTC
From: gnuarm.2007@...
Topic: 10918 Message: 10919

I believe Google will learn from you if you go into the junk mailbox and tell it those messages are not spam. The good part is they use this to help *everone's* spam filters.

10920. Re: [loopantennas] Re: OT: Loopant group to gmail = spam?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-29 18:39:47 UTC
From: Adrian Flynn
Topic: 10918 Message: 10920

I was doing that daily until I got tired of it hoping it would learn.
After a month I gave up and made a filter, I am sick of seeing the SPAM
notice at the top of every message.
I know I made a filter and it is not spam!

72
Adrian KF7DYU
On Mar 29, 2015 1:33 PM, "gnuarm.2007@... [loopantennas]" <
loopantennas@yahoogroups.com> wrote:

>
>
> I believe Google will learn from you if you go into the junk mailbox and
> tell it those messages are not spam. The good part is they use this to
> help *everone's* spam filters.
>
>

10921. Re: [loopantennas] OT: Loopant group to gmail = spam?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-29 18:39:34 UTC
From: Andy
Topic: 10918 Message: 10921

Adrian wrote:

"Does anyone have an idea why gmail AUTOMATICALLY sends group mail to spam folder?"

I am guessing you are talking about Gmail, and about messages going to your spam folder on your Gmail account.

It doesn't happen with mine.

Each person's spam filtering is unique. It may be that you had received a lot of spam, that trained your spam filter to think these messages are spam too.

If you are depending on a Filter you created, to keep them out of your spam filter, it denies your spam filter the chance to 'learn' that they aren't actual spam. Your spam filter learns mainly from you clicking on the "Spam" or "Not Spam" buttons. But it can be maddening when it takes the spam filter a long time to re-learn.

When those messages did go to your spam folder, Gmail tells you why it thinks they are spam (e.g., are they similar to other messages you marked as spam? Did they come from the same domain as other spam? etc.) I take those hints with a large grain of salt, but they might help give you an idea of why it thinks they are spam.

Andy

10922. Re: [loopantennas] Re: OT: Loopant group to gmail = spam?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-29 18:41:57 UTC
From: Andy
Topic: 10918 Message: 10922

"I am sick of seeing the SPAM notice at the top of every message.
I know I made a filter and it is not spam!"

You may be sick of it, but just ignore it.

(I know, it can take some self-control. There are things about Windows I
see daily that drive me nuts!)

Andy

10923. Gmail SPAM

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-03-30 11:18:26 UTC
From: jonathan white
Topic: 10923 Message: 10923

Hi does the same with me.
I want the Administrators to send all mail to my Linux email app,Claws very stable and has a good spam filter.oh Linux mint is the platform Ubuntu based and very easy to use the Mate version I use.For what its worth .
Jon G8CCL

10924. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-01 13:09:40 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10924

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10925. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-01 13:09:40 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10925

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10926. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-03 17:54:39 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 10926

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /80Meterhorizontalloop.pdf
Uploaded by : everettsharp74 <everettsharp@...>
Description : 80 Meter Horizontal Loop Antenna

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/80Meterhorizontalloop.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

everettsharp74 <everettsharp@...>

10927. 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-03 18:01:09 UTC
From: everettsharp@...
Topic: 10927 Message: 10927

Guys,

I just posted in the files section "80 Meter Horizontal Loop Antenna" that discribes the process of tuning the loop and experimenting with a Balun Design's 2.5:1 and a home brew 4:1 balun and a final length of 275'. I am very please with the results and hope the information will be of some value to the members on this list. This is the closests thing to a multi-band HF antenna that I have seen yet

Everett N8CNP

10928. Re: 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-04 11:24:44 UTC
From: sal.cerda@...
Topic: 10927 Message: 10928

Everett,
You mentioned the antenna's quietness. What was your previous antenna and how are the signal reports on your new 80 meter loop?
Sal

10929. Re: [loopantennas] Re: 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-04 11:48:02 UTC
From: Everett Sharp
Topic: 10927 Message: 10929

Sal,

The 80M loop replaced a 80M Windom. I also have a 6' active RX loop and I find the 80M loop to be just as quite as my active loop on most bands. To date I have only made a few DX contacts, but have been able to work any station that I can hear and I am only running 100 watts.

Everett N8CNP

Sent from my iPad

> On Apr 4, 2015, at 6:24 AM, sal.cerda@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Everett,
> You mentioned the antenna's quietness. What was your previous antenna and how are the signal reports on your new 80 meter loop?
> Sal
>
>

10930. Re: [loopantennas] Re: 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-04 12:29:23 UTC
From: Brian
Topic: 10927 Message: 10930

Everett,
Interesting to hear of your new 80m loop.
I had a 40m version in the shape of a diamond at 30ft, feed point
was at the South sharp point with a quarter wave of 120 ohm twin line.

Worked like a dream on 40 – 10m, 248 DXCC countries wkd / cnf with 5 watts SSB
only from a TS-130V, great days !!!!

A word of warning, loops attract static and though we don't get many storms in
NW UK I had a number of hefty belts off the antenna over the years.

Regards,
72, Brian, GØNSL-QRP.

From: mailto:loopantennas@yahoogroups.com
Sent: Saturday, April 04, 2015 12:48 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: 80 Meter Horizontal Loop Antenna

10931. Re: 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-04 13:02:30 UTC
From: tenorman1952@...
Topic: 10927 Message: 10931

EXCELLENT results, Everette! I was also surprised to see that the 4:1 balun worked better than the 2.5:1 balun. But no matter, you have it working as well as could be expected.

I've been wanting to do a horizontal loop, this is pushing me in that direction! Thanks for publishing these results of your work.

73,
Paul - AE5JU

10932. Re: [loopantennas] Re: 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-04 13:36:06 UTC
From: Everett Sharp
Topic: 10927 Message: 10932

Hi Brian,

Thanks for the reply and your comments re: static concerns. The 4:1 Balun that I am using is a current type and therefore electrically shorts static charges. I also have a very good earth ground before it enters my house. Also as a cover all I always remove the antenna from my rig when not using it.

Everett N8CNP

Sent from my iPad

> On Apr 4, 2015, at 7:29 AM, 'Brian' brian.nsl@... [loopantennas]
<loopantennas@yahoogroups.com> wrote:
>
> Everett,
> Interesting to hear of your new 80m loop.
> I had a 40m version in the shape of a diamond at 30ft, feed point
> was at the South sharp point with a quarter wave of 120 ohm twin line.
>
> Worked like a dream on 40 – 10m, 248 DXCC countries wkd / cnf with 5 watts SSB
> only from a TS-130V, great days !!!!
>
> A word of warning, loops attract static and though we don't get many storms in
> NW UK I had a number of hefty belts off the antenna over the years.
>
> Regards,
> 72, Brian, GØNSL-QRP.
>
> From: mailto:loopantennas@yahoogroups.com
> Sent: Saturday, April 04, 2015 12:48 PM
> To: loopantennas@yahoogroups.com
> Subject: Re: [loopantennas] Re: 80 Meter Horizontal Loop Antenna
>
>
>

10933. Re: [loopantennas] Re: 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-04 14:38:18 UTC
From: Brian
Topic: 10927 Message: 10933

Everett,
Excellent safety system you have.
When the sky darkens here I drop the loop on the lawn hi!

What first made me aware of the fact was during one approaching storm
I had shut down the station but could here this ‘ ticking ‘ noise, looking around in the gloomy
shack I could see sparks jumping from the body of the SO-239 antenna socket to the center pin
at the wall panel where I plug in the rigs patch lead.
That was when I started lowering the loop to ground !!!!!

72, Brian, GØNSL- QRP.

From: mailto:loopantennas@yahoogroups.com
Sent: Saturday, April 04, 2015 2:36 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: 80 Meter Horizontal Loop Antenna

10934. 80 Meter Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-04 17:27:55 UTC
From: everettsharp@...
Topic: 10927 Message: 10934

Guys,

I have replaced the article "80 Meter Horizontal Loop Antenna" with a correct version.

Everett N8CNP

10935. Re: What's a Good Tripod to get for the AlexLoop Walkman Antenna?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-05 14:00:34 UTC
From: sjdeines@...
Topic: 10840 Message: 10935

Although this kit comes with more than a tripo, here is a Universal Deploment Kit that comes with an AlexLoop adapter for the included tripod,

Universal Loop Deployment Kit for Alpha Loop Jr & others [Loop_Jr_Deployment_Kit] - $150.00 : Alpha Antennas Amateur Radio Store for hams, Established in 2005 https://amateurradiostore.com/parts-coax-updates-etc-c-23/mounts-springs-accessories-c-23_92/universal-loop-deployment-kit-for-alpha-loop-jr-others-p-350?zenid=bfg1b7stfm2fsheu166vf93e32

https://amateurradiostore.com/parts-coax-updates-etc-c-23/mounts-springs-accessories-c-23_92/universal-loop-deployment-kit-for-alpha-loop-jr-others-p-350?zenid=bfg1b7stfm2fsheu166vf93e32

Universal Loop Deployment Kit for Alpha Loop Jr & othe... https://amateurradiostore.com/parts-coax-updates-etc-c-23/mounts-springs-accessories-c-23_92/universal-loop-deployment-kit-for-alpha-loop-jr-others-p-350?zenid=bfg1b7stfm2fsheu166vf93e32 Alpha Antennas Amateur Radio Store for hams Universal Loop Deployment Kit for Alpha Loop Jr & others [Loop_Jr_Deployment_Kit] - ****** If ord...

View on amateurradiostore.com https://amateurradiostore.com/parts-coax-updates-etc-c-23/mounts-springs-accessories-c-23_92/universal-loop-deployment-kit-for-alpha-loop-jr-others-p-350?zenid=bfg1b7stfm2fsheu166vf93e32
Preview by Yahoo

Steve/N0TES

10936. Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-15 21:54:50 UTC
From: gail21@...
Topic: 10936 Message: 10936

Can I gain some advice off the group regarding Mag Loop construction

wish to know is it better to use a vaccum variable cap Or Butterfly cap?
reliable place to purchase vaccum variable cap based off user experience?Vacuum Variable Capacitor 10-500pF
since the vaccum variable is copper and sealed should a copper loop be used?
if I go with a butterfly cap should I use an aluminium loop? if rotor stator are also aluminium?
price for Butterfly cap that will give a good capacitance range (rotor and stator only)10-500pF
Loop construction, was thinking of using a three roller jig or are there any U.K hams that have
locally sourced solutions was thinking of around 22mm dia tube?
TX power out will be approx 150w

73s for now

G4xcp

10937. Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-17 13:36:41 UTC
From: rbrucecarter@...
Topic: 10936 Message: 10937

Here is my page ----

AM Loop Antennas http://earmark.net/gesr/loop/

http://earmark.net/gesr/loop/

AM Loop Antennas http://earmark.net/gesr/loop/ AM LOOP ANTENNAS Now QUINN approved! Erin Sanders, who played the part of teenage inventor Quinn Pensky on Nickelodeon's "Zoey 101" show, with th...

View on earmark.net http://earmark.net/gesr/loop/
Preview by Yahoo

Butterfly cap is no different from other variable caps. A variable cap is a variable cap. I had a supply of tuning caps from junked radios. Air core vs. sealed with insulating plastic (transistor radio type) - no difference. The resistance of the wire is hundreds of times more important than capacitor leakage. I will warn you about very old butterfly caps and very old air core caps - they were more linear, and tuning the loop on the high end of the dial is next to impossible. All of my very old caps are sitting in the bin unused. Look for caps with the shaft towards one side and the plates small on one side and large on the other.

Most transistor radio caps top out about 250 pF. You can extend that by putting the oscillater section in parallel, but you won't reach 500 pF. My one and only 500 pF variable came out of an early 70's European receiver that had longwave. It does make it easier to construct a loop, but you can usually get the entire AM band if you switch a few turns of wire in and out. It really isn't that big of deal - using a loop is pretty interactive with the tuner and loop being tuned separately, flicking a switch for frequency range on the loop is just a minor step. If you are lucky enough to find a tuning cap out of a tuned RF radio, it has a section you can parallel with the antenna section to get more capacitance. Instead of 365 pF max, you get 730! Of course the high side doubles, too, so you might need a switch on the cap sections.

10938. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-17 15:17:01 UTC
From: Dexter
Topic: 10936 Message: 10938

I take the opposite approach. The point is that you want the highest L/C ratio possible. It's the coil that captures the signal, so you want to make the inductance of the circuit as high as possible. The cap is just there for resonance. If you're using more than 200 pf, you can do a lot better.

A good way to use an old 2-gang variable is to connect the sections in series. The metal frame becomes the common connection. This reduces the total capacitance in half and raises the frequency range for a given coil. You can then wind more turns on the coil and increase its so-called effective height, AN, where A is the area of each turn and N the number of turns. Connecting an SPST switch across one gang will short it out, double the capacitance, and lower the tuning range. Another way to do this is to put a small trimmer cap in series with the variable. Either way effectively gives you a 2-band antenna and, in the process, gives you some much needed bandspread at the high end of the tuning range.

There is a limit to this. Every coil has distributed capacitance, a point at which it is self-resonant, and it cannot be used in a tuned circuit beyond that frequency. I try to get the top frequency of the antenna as close as possible to the self-resonant point of the coil. The down side of this is stability. Adding just a picofarad of capacitance at the high end will significantly detune the antenna. This can be produced by body capacitance. That's were some mechanical considerations come into play, isolating the capacitor from the knob.

Some of the old single-section variable caps sold by Hammarlund and E.F. Johnson are also quite good. I'm using one on shortwave which covers 14 to 23 MHz and only has a max of 30 pf.

Regards,

Bob

10939. Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-17 19:41:49 UTC
From: gnuarm.2007@...
Topic: 10936 Message: 10939

Hi, reading your web page I see where you indicate the radiation pattern is different for a spiral wound loop than for a solenoid wound loop (what you call edge wound). Can you provide any references on this? I can't picture how the antenna would operate completely differently just by changing the small aspect of spiral vs. solenoid winding.

Picture a large loop with windings spaced fairly close together. I think the image of how the magnetic fields form and interact are intuitive to most experiences in electronics. I can't see how changing the spacing of the wires from a solenoid configuration to a spiral configuration (a very small change in how they interact) can possibly reverse the position of the nulls and the nodes.

Is there something I am missing?

Rick

10940. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-17 20:13:35 UTC
From: Dexter
Topic: 10936 Message: 10940

On 4/17/2015 3:41 PM, gnuarm.2007@... [loopantennas] wrote:
>
> Hi, reading your web page I see where you indicate the radiation
> pattern is different for a spiral wound loop than for a solenoid wound
> loop (what you call edge wound). Can you provide any references on
> this? I can't picture how the antenna would operate completely
> differently just by changing the small aspect of spiral vs. solenoid
> winding.
>
> Picture a large loop with windings spaced fairly close together. I
> think the image of how the magnetic fields form and interact are
> intuitive to most experiences in electronics. I can't see how
> changing the spacing of the wires from a solenoid configuration to a
> spiral configuration (a very small change in how they interact) can
> possibly reverse the position of the nulls and the nodes.
>
> Is there something I am missing?
>
> Rick
>
> __._,_.
I believe you are correct. Nulls are along the axis of the coil, regardless of the coil being in the shape of a solenoid or spiral ("pancake loop"). Think of the response pattern being a doughnut with an infinitesimally small hole.

Incidentally, distributed capacitance of a coil is minimized when it is wound as a spiral. In theory this allows you to maximize the L/C ratio and effective height for any given band of coverage. Having a negligible thickness they are also easier to construct.

Regards,

Bob C.

10941. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-17 21:26:47 UTC
From: gnuarm.2007@...
Topic: 10936 Message: 10941

Why do you say the distributed capacitance is lower with a spiral? Picturing the same image of a large coil, I can't see any reason why the capacitance would be appreciably lower with one than the other.

As to construction, I think that depends on many factors. The antenna I built (but not yet tested) was made with small boards (1x3 I think) and the wires wound around the ends of the boards. I think winding a spiral would have been much harder in this case.

Rick

10942. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-17 22:34:42 UTC
From: Dexter
Topic: 10936 Message: 10942

On 4/17/2015 5:26 PM, gnuarm.2007@... [loopantennas] wrote:
>
> Why do you say the distributed capacitance is lower with a spiral?
> Picturing the same image of a large coil, I can't see any reason why
> the capacitance would be appreciably lower with one than the other.
>
Many years ago, I had access to a well stocked engineering library, and
put it to good use when I started building loop antennas. This little
nugget on distributed capacitance came from "The Theory and Design of
Inductance Coils," by V.G. Welsby, John Wiley & Sons, 1960, p. 145.
"The self capacitance is directly proportional to the length of the
coil, thus leading to the conclusion that, for a given space, the type
of solenoid which will have the least self-capacitance is a flat 'disc'
winding, extending practically to the centre of the coil."
>
>
> As to construction, I think that depends on many factors. The antenna
> I built (but not yet tested) was made with small boards (1x3 I think)
> and the wires wound around the ends of the boards. I think winding a
> spiral would have been much harder in this case.
>
I start with crosses made from strip wood, 3/4" x 1/2" for LW and MW and
3/8" square for SW. I pre-drill holes at 1/4" or 1/2" intervals before
assembly. The coil is thus wound tennis-racket style through the
holes. This makes for a very light-weight antenna. Light weight is
also important if you want to balance the coil so it can be rotated
vertically as well as horizontally. Details are provided in
Electrically Small Resonant Loop for Shortwave (Oct '14).pdf and
Electrically Small Resonant Loop for Medium Wave.pdf in the files section.

Some solenoid designs have "shoes" attached to the ends of the cross
pieces so that the turns can be spaced an inch or so apart, thus
decreasing the distributed capacitance.

Bob C.

10943. Wire for Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-18 01:25:03 UTC
From: caodwolf@...
Topic: 10943 Message: 10943

Hello everyone. I have recently been bitten by Ultralight AM craze after listening to a presentation at the NASWA Shortwave Fest. I have a small commercial loop antenna and want to build my own using PVC piping. There is a good article written by Gary DeBock on this.

The one piece I am struggling with is what kind of wire to use. I want 18 gauge stranded which is what the article references but am finding this a little overwhelming as to where or what type I should obtain. I've read of some using Litz wire, copper enameled wire and then even speaker wire.

I Google this and get a bewildering range of stuff. I would appreciate if someone could assist and steer me in the right direction. Building the thing looks pretty straight forward but I assume if you don't use the right type of wire your DX can suffer. My interest is in the AM band.

Thanks in Advance

David Turnick
Reading ,PA

10944. Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-17 16:10:58 UTC
From: captcurt@...
Topic: 10936 Message: 10944

Mr Carters' response was only partially true when he states that caps are the same. There is a HUGE difference between a vacuum variable and a plastic insulated variable that he mentions. Buterfly caps are used in a particular configuration that essentially creates a center-tapped capacitance.

I think is comments, and perhaps others are given from the perspective of a receiving-only loop.

The reference you have, calling for a vacuum variable cap is specified that way so it can be used to transmit as well. The big advantage that vacuum variables have is very high RF voltage capability. THis is a must.for transmitting circuits where the off resonant voltages can be in the kilovolt range. Quite simply, the small receiving caps will meltdown and evaporate when used in a transmitting environment--perhaps causing damage to the transmitter as well.

So...if you are building for Rx only, use what you have....if you want to make it for Tx as well, better use the right stuff.

Curt
KU8L

10945. RE: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-18 18:43:29 UTC
From: Silverfox
Topic: 10936 Message: 10945

I apologize if this is a redundant question but are there any advantages or disadvantages to using braided wire versus solid?

73,

Alan - W6ARH

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Friday, April 17, 2015 9:11 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: Mag Loop Advice

Mr Carters' response was only partially true when he states that caps are the same. There is a HUGE difference between a vacuum variable and a plastic insulated variable that he mentions. Buterfly caps are used in a particular configuration that essentially creates a center-tapped capacitance.

I think is comments, and perhaps others are given from the perspective of a receiving-only loop.

The reference you have, calling for a vacuum variable cap is specified that way so it can be used to transmit as well. The big advantage that vacuum variables have is very high RF voltage capability. THis is a must.for transmitting circuits where the off resonant voltages can be in the kilovolt range. Quite simply, the small receiving caps will meltdown and evaporate when used in a transmitting environment--perhaps causing damage to the transmitter as well.

So...if you are building for Rx only, use what you have....if you want to make it for Tx as well, better use the right stuff.

Curt
KU8L

10946. Re: [loopantennas] Wire for Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-18 20:18:06 UTC
From: ferrox4@...
Topic: 10943 Message: 10946

May I ask, what is the ultralight am craze??

Sent from my iPhone

> On Apr 17, 2015, at 9:25 PM, "caodwolf@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Hello everyone. I have recently been bitten by Ultralight AM craze after listening to a presentation at the NASWA Shortwave Fest. I have a small commercial loop antenna and want to build my own using PVC piping. There is a good article written by Gary DeBock on this.
>
> The one piece I am struggling with is what kind of wire to use. I want 18 gauge stranded which is what the article references but am finding this a little overwhelming as to where or what type I should obtain. I've read of some using Litz wire, copper enameled wire and then even speaker wire.
>
> I Google this and get a bewildering range of stuff. I would appreciate if someone could assist and steer me in the right direction. Building the thing looks pretty straight forward but I assume if you don't use the right type of wire your DX can suffer. My interest is in the AM band.
>
> Thanks in Advance
>
> David Turnick
> Reading ,PA
>
>

10947. Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-18 22:53:04 UTC
From: gnuarm.2007@...
Topic: 10936 Message: 10947

I did some significant research on this a while back and I don't recall stranded wire being any better than solid unless it is Litz wire where each conductor is insulated from the others. The issue I believe is the skin effect where the AC current mostly flows near the surface making the apparent resistance of the wire higher than the DC resistance. This increases losses which lower the Q and therefore the strength of the signal.

The skin effect also limits the useful diameter of the wire. So I can't imagine needing 18 gauge wire. Litz wire is usually specified with two numbers, the number of strands and the wire gauge of each strand. I believe there is also braided Litz wire which I'm not sure the reason for. I think it may provide more event current distribution in the conductors.

Rick

10948. Re: [loopantennas] Wire for Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-18 23:22:09 UTC
From: T. Hills
Topic: 10943 Message: 10948

David,

I've built many tuned and untuned loops over the Years for MW/LW and for the MW band the best I've found is Litz that has multiple strands of 46 Ga. wire. It's usually described as ga/nn where ga=gauge of conductors and nn=number of conductors in the wire. The small gauge minimizes the skin effect at MW frequencies and the more conductors the lower the resistance and the higher the "Q" of the tuned circuit. I've found that for most air and small ferrite core loop antennas the expense and hassle of anything over 46/100 isn't worth it but for Ferrite Sleeve Loops and high Q coils 46/660 will make a big difference. YMMV. I get mine from mkmak222* on Ebay, decent prices and I've never had a problem.

Don't expose Litz to the weather or direct sunlight for long periods. The wire is very thin and so is the insulation and protective coating. I learned this the hard way :(

*I don't know the vendor personally nor do I get anything for mentioning them. I'm just a satisfied customer passing along a reliable source for Litz Wire.

Tim Hills
Sioux Falls, SD

------ Original Message ------
From: "caodwolf@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: 4/17/2015 8:25:03 PM
Subject: [loopantennas] Wire for Loop Antenna

>
>Hello everyone. I have recently been bitten by Ultralight AM craze
>after listening to a presentation at the NASWA Shortwave Fest. I have
>a small commercial loop antenna and want to build my own using PVC
>piping. There is a good article written by Gary DeBock on this.
>
> The one piece I am struggling with is what kind of wire to use. I
>want 18 gauge stranded which is what the article references but am
>finding this a little overwhelming as to where or what type I should
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>I Google this and get a bewildering range of stuff. I would appreciate
>if someone could assist and steer me in the right direction. Building
>the thing looks pretty straight forward but I assume if you don't use
>the right type of wire your DX can suffer. My interest is in the AM

>band.
>
>Tha nks in Advance
>
>David Turnick
>Reading ,PA
>
>

10949. Re: [loopantennas] Wire for Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-19 02:02:25 UTC
From: Don
Topic: 10943 Message: 10949

Well, no one else has spoken up. Basically a very small portable radio
with a BIG wire loop or ferrite bar antenna with the intention/result of
logging very far away stations/NDBs.

More Live Radio Fun and a Whole Lot More!

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
FRG-100B FunCube Dongle Pro+
ICF2010 Perseusx3 WR-G31DDCx2
R70 R71A w/250Hz R75x2 w/250Hz
PRN1000 SDR-IQ SPR-4 SSR-1
SR-AF & LPF DSP599zx MFJ-784B
HD-1418 AF-1 MSB-1
PA0RDT Mini-Whipx2 @ 25ft
RYOAA @ 25ft 30ft LNV
ALA100Lx2 Z1501F @20ft w/9ft Whip
Solarcon A-99

On 18-Apr-15 13:18, ferrox4@... [loopantennas] wrote:
>
>
> May I ask, what is the ultralight am craze??
>
>
>
> Sent from my iPhone
>
> On Apr 17, 2015, at 9:25 PM, "caodwolf@...
> <mailto:caodwolf@...> [loopantennas]"
> <loopantennas@yahoogroups.com <mailto:loopantennas@yahoogroups.com>>
> wrote:
>
>> Hello everyone. I have recently been bitten by Ultralight AM craze
>> after listening to a presentation at the NASWA Shortwave Fest. I
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>> PVC piping. There is a good article written by Gary DeBock on this.
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>> The one piece I am struggling with is what kind of wire to use. I
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>> I Google this and get a bewildering range of stuff. I would

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>> direction. Building the thing looks pretty straight forward but I
>> assume if you don't use the right type of wire your DX can suffer. My
>> interest is in the AM band.
>>
>> Thanks in Advance
>>
>> David Turnick
>> Reading ,PA
>>
>
>
>

10950. Re: [loopantennas] Wire for Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-19 15:03:58 UTC
From: ferrox4@...
Topic: 10943 Message: 10950

Thanks for that don, been out of the game for awhile wasn't sure what it meant. Makes sense. Get rid of all the sdr's, big boat anchors. the noise inducing power supplies and computers and go back to basics. I have a sangean pr-d5 I need to dust off, get it out in a field, far away from all the house noise. Now I just need to figure out how to do the big ferrite loop. Although there is a built in one in the pr-d5.
73. John

Sent from my iPhone

> On Apr 18, 2015, at 10:02 PM, "Don stb55@... [loopantennas]"
<loopantennas@yahoogroups.com> wrote:
>
> Well, no one else has spoken up. Basically a very small portable radio
> with a BIG wire loop or ferrite bar antenna with the intention/result of
> logging very far away stations/NDBs.
>
> More Live Radio Fun and a Whole Lot More!
>
> Don KPC6NDB
> Upland, CA
> 34.10 -117.63 1250ft
> FRG-100B FunCube Dongle Pro+
> ICF2010 Perseusx3 WR-G31DDCx2
> R70 R71A w/250Hz R75x2 w/250Hz
> PRN1000 SDR-IQ SPR-4 SSR-1
> SR-AF & LPF DSP599zx MFJ-784B
> HD-1418 AF-1 MSB-1
> PA0RDT Mini-Whipx2 @ 25ft
> RYOAA @ 25ft 30ft LNV
> ALA100Lx2 Z1501F @20ft w/9ft Whip
> Solarcon A-99
>
>> On 18-Apr-15 13:18, ferrox4@... [loopantennas] wrote:
>>
>>
>> May I ask, what is the ultralight am craze??
>>
>>
>>
>> Sent from my iPhone
>>
>> On Apr 17, 2015, at 9:25 PM, "caodwolf@...
>> <mailto:caodwolf@...> [loopantennas]"
>> <loopantennas@yahoogroups.com <mailto:loopantennas@yahoogroups.com>>
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>>> Hello everyone. I have recently been bitten by Ultralight AM craze
>>> after listening to a presentation at the NASWA Shortwave Fest. I
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>>> The one piece I am struggling with is what kind of wire to use. I
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>>> Thanks in Advance
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>>> David Turnick
>>> Reading ,PA
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> ------------------------------------
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> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!
> ------------------------------------
>
> Yahoo Groups Links
>
>
>

10951. Re: [loopantennas] What radios for ultra light AM DX

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-19 15:13:14 UTC
From: ferrox4@...
Topic: 10943 Message: 10951

Was wandering what radios are being used by hobbyists for ultralight am dx?? Certainly there are favorites and top
Performers out there.
73. John

Sent from my iPhone

> On Apr 19, 2015, at 11:03 AM, "ferrox4@... [loopantennas]"
<loopantennas@yahoogroups.com> wrote:
>
> Thanks for that don, been out of the game for awhile wasn't sure what it meant. Makes sense. Get rid of all the sdr's, big boat anchors. the noise inducing power supplies and computers and go back to basics. I have a sangean pr-d5 I need to dust off, get it out in a field, far away from all the house noise. Now I just need to figure out how to do the big ferrite loop. Although there is a built in one in the pr-d5.
> 73. John
>
> Sent from my iPhone
>
> > On Apr 18, 2015, at 10:02 PM, "Don stb55@... [loopantennas]"
<loopantennas@yahoogroups.com> wrote:
> >
> > Well, no one else has spoken up. Basically a very small portable radio
> > with a BIG wire loop or ferrite bar antenna with the intention/result of
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> > Don KPC6NDB
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> > 34.10 -117.63 1250ft
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> > R70 R71A w/250Hz R75x2 w/250Hz
> > PRN1000 SDR-IQ SPR-4 SSR-1
> > SR-AF & LPF DSP599zx MFJ-784B
> > HD-1418 AF-1 MSB-1
> > PA0RDT Mini-Whipx2 @ 25ft
> > RYOAA @ 25ft 30ft LNV
> > ALA100Lx2 Z1501F @20ft w/9ft Whip
> > Solarcon A-99
> >
> >> On 18-Apr-15 13:18, ferrox4@yahoo.com [loopantennas] wrote:
> >>
> >>

> >> May I ask, what is the ultralight am craze??
> >>
> >>
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> >> Sent from my iPhone
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> >> On Apr 17, 2015, at 9:25 PM, "caodwolf@...
> >> <mailto:caodwolf@gmail.com> [loopantennas]"
> >> <loopantennas@yahoogroups.com <mailto:loopantennas@yahoogroups.com>>
> >> wrote:
> >>
> >>> Hello everyone. I have recently been bitten by Ultralight AM craze
> >>> after listening to a presentation at the NASWA Shortwave Fest. I
> >>> have a small commercial loop antenna and want to build my own using
> >>> PVC piping. There is a good article written by Gary DeBock on this.
> >>>
> >>> The one piece I am struggling with is what kind of wire to use. I
> >>> want 18 gauge stranded which is what the article references but am
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> >>>
> >>> I Google this and get a bewildering range of stuff. I would
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> >>> assume if you don't use the right type of wire your DX can suffer. My
> >>> interest is in the AM band.
> >>>
> >>> Thanks in Advance
> >>>
> >>> David Turnick
> >>> Reading ,PA
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> > ------------------------------------
> >
> > If you've got links, post them in the Links section!
> > http://groups.yahoo.com/group/loopantennas/links
> >
> > Post files here. If the file comes from a website, please put it in the Links rather
than uploading the file.
> > http://groups.yahoo.com/group/loopantennas/files
> >
> > You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos.
Please convert BMP or TIF to JPG or GIF before uploading.
> > http://ph.groups.yahoo.com/group/loopantennas/photos

> >
> > And please trim all this when replying!
> > ----------
> >
> > Yahoo Groups Links
> >
> >
> >
>

10952. Re: [loopantennas] What radios for ultra light AM DX

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-19 15:31:56 UTC
From: timchandler2001@...
Topic: 10943 Message: 10952

See the ultralightdx group at

Ultralight DX https://groups.yahoo.com/neo/groups/ultralightdx/conversations/messages

https://groups.yahoo.com/neo/groups/ultralightdx/conversations/messages

Ultralight DX https://groups.yahoo.com/neo/groups/ultralightdx/conversations/messages A discussion area to support the growth of Ultralight MW Radio DXing

View on groups.yahoo.com
https://groups.yahoo.com/neo/groups/ultralightdx/conversations/messages
Preview by Yahoo

"Ultralight" is defined by the size/volume of the radio (per the group standards) and several other features (no SSB capability, for instance). "Barefoot" is using the radio as-is, no modified ferrite or loop antenna. The DX part comes in when one takes advantage of propagation trends/windows to catch and identify broadcasts not normally available in one's listening area, including from other countries.

There are many radios that qualify as "ultralight", one of the new ones and already a favorite of many being the CCrane Skywave.

Tim

10953. Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-19 18:58:22 UTC
From: Steve Greenfield
Topic: 10936 Message: 10953

Regarding stranded vs solid vs litz wire.
Litz wire is made of individually insulated strands of wire bundled together. It comes in anything from very small bundles of very fine wire, to very large bundles of still rather fine wire for use in high power high frequency.
This is because of the skin effect, where at higher frequencies the current tends to travel only in the skin of the conductor.
The problem with regular stranded wire is that at higher frequencies with the wires in electrical contact, the wire begins to act more like a slotted solid wire. So it actually reduces the effective surface area.
For receiving loops, I'm not sure any of this makes a huge difference in distance as much as it does in selectivity. People here more qualified than I can make statements about that.
Steve Greenfield AE7HD
http://www.linkedin.com/in/stevenjgreenfield

10954. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-19 22:00:31 UTC
From: BobC
Topic: 10936 Message: 10954

I just did a casual calculation on my longwave, 80-turn spiral loop of 22 AWG stranded hookup wire. The outer turn is 36" on a side and the inner turn 8". I found the coil to contain approximately 147 ft of wire. The Q is sharp enough to require retuning every 1 kHz. I would suspect the bandwidth (-6 db) to be something less than that. It would be interesting to note any difference using Litz wire. Perhaps the skin effect is significantly less from 150 kHz through 450 kHz.

Bob C.

On 4/19/2015 2:58 PM, Steve Greenfield alienrelics@...
[loopantennas] wrote:
> Regarding stranded vs solid vs litz wire.
>
>
> The problem with regular stranded wire is that at higher frequencies
> with the wires in electrical contact, the wire begins to act more like
> a slotted solid wire. So it actually reduces the effective surface area.
>
> For receiving loops, I'm not sure any of this makes a huge difference
> in distance as much as it does in selectivity. People here more
> qualified than I can make statements about that.
>
>

10955. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-19 22:20:51 UTC
From: Will
Topic: 10936 Message: 10955

I have at various times used a MW loop to help transistor radios when signals were weak. Usually it was made from pre-used enamelled copper wire removed from some dead component wound over wooden cross arms and with little or no spacing. A s/h twin gang tuning capacitor was used. for tuning.

Sometimes radio would go on platform at base, other times a link coupling turn was used with the same single strand copper wire twisted to make a "transmission line" to a coupling loop round radio or ferrite rod.

Whether using Litz wire would have made a significant difference I have no idea. Too high a Q would probably have resulted in sideband cutting with poorer audio.

Biggest problem for me was trying to keep the wires tight. Any ideas for keeping single stand enamelled wire taut?

Cheers,
Will

On 20/04/15 10:00, BobC dexterdxer@... [loopantennas] wrote:
>
>
> I just did a casual calculation on my longwave, 80-turn spiral loop of
> 22 AWG stranded hookup wire. The outer turn is 36" on a side and the
> inner turn 8". I found the coil to contain approximately 147 ft of
> wire. The Q is sharp enough to require retuning every 1 kHz. I would
> suspect the bandwidth (-6 db) to be something less than that. It would
> be interesting to note any difference using Litz wire. Perhaps the skin
> effect is significantly less from 150 kHz through 450 kHz.
>
> Bob C.
>
> On 4/19/2015 2:58 PM, Steve Greenfield alienrelics@...
> [loopantennas] wrote:
>>
>> Regarding stranded vs solid vs litz wire.
>>
>>
>> The problem with regular stranded wire is that at higher frequencies
>> with the wires in electrical contact, the wire begins to act more like
>> a slotted solid wire. So it actually reduces the effective surface area.
>>
>> For receiving loops, I'm not sure any of this makes a huge difference
>> in distance as much as it does in selectivity. People here more
>> qualified than I can make statements about that.

10956. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 13:47:51 UTC
From: gnuarm.2007@...
Topic: 10936 Message: 10956

I'm not an expert on the electronics of tuned loop antennas, but if you construct one with the wires taught and it becomes loose, that means your frame has changed shape or size. I know wood can change shape and size when the humidity changes and to a lesser extent when the temperature changes. You might consider a different material or perhaps use an adjustment on the frame that allows you to lengthen one of the arms to make it taught again. If you don't mind a bit of additional complexity, I can picture one arm with an elbow hinge in the middle and a turnbuckle to the adjacent arm to pull the elbow and lengthen the arm. Do they make plastic turnbuckles? I think a metal one might not be the best idea. If you can't buy a plastic one, you can always make one easily enough. It's just a block of plastic with tapped holes and a couple of screws.

Rick

10957. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 13:58:23 UTC
From: gnuarm.2007@...
Topic: 10936 Message: 10957

Without doing the calculations I would say at 150 kHz, the Q of an antenna using 22 ga wire is limited by the skin effect. I worked on a 60 kHz antenna using RG-6 coax which uses an 18 ga inner conductor and the skin effect was definitely in play. I couldn't easily change the gauge so I was fine with that. But with your antenna both the frequency is a lot higher while 22 ga is not a lot smaller than 18 ga, so a smaller wire could have been used with no ill effect on the antenna.

The skin effect is not absolute. The profile of current is a smooth curve from the outside to the center. But once the radius of the wire passes the skin depth you are reaching a point of diminishing returns using fatter wires.

Rick

10958. Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 15:04:50 UTC
From: jfarley44@...
Topic: 10936 Message: 10958

Hey Will;

All wire will stretch a bit with time, to various degrees, and will cause sagging in a loop. This is implicitly a restatement of the "Rope Around the Earth" problem, and it doesn't take very much wire stretch to distort the winding shape:
http://mathforum.org/mathimages/index.php/Rope_around_the_Earth
http://mathforum.org/mathimages/index.php/Rope_around_the_Earth

The question is: Do you feel that this is changing the loop performance, or is it a question of aesthetics?

In either case, the suggestions offered by Rick will help. Alternatively, simply re-tensioning the wire by pulling it around the frame as a matter of routine maintenance may be all that's required for a loop which will primarily be used indoors, as seems to be your situation. At some point, the wire may settle down, and the stretch vs time should slow down for copper wire as it's cold worked.

Loops which are permanently sited outdoors are a different matter. I have used remotely tuned outdoors loops for years, and twice a year PM is absolutely required here in Chicago. The wire here is generally 10 AWG type TEW, and outdoor loops just seem to be a magnet for perching birds and flying squirrels (if the loop is sited near a tree). Windings are re-tensioned in the Spring and Fall, and just allowed to sag away between these PMs with very little noticeable effect on loop performance. By far, the bigger variations in performance (tuning range and Q) can be attributed to changes in temperature and humidity.

Hope this helps, joe

10959. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 15:16:59 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 10959

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /IMG_20140926_061922.jpg
Uploaded by : oliverinusa2006 <oliverinusa@...>
Description : 600 mm Loop

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/IMG_20140926_061922.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

oliverinusa2006 <oliverinusa@...>

10960. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 15:33:13 UTC
From: Bob C
Topic: 10936 Message: 10960

No expert here either - just some seat-of-the-pants, long-term observations. My 80-turn, LW loop, which tunes 150 to 420 kHz, as reported, has approximately 147 feet of 22 AWG insulated, stranded wire in the main coil. I used pine lattice stock for the cross pieces. These were drilled at 1/4" intervals (diagonal) to thread the wire tennis racket style, so the turn separation is somewhat less than 1/4".

Note: This antenna is at least 30 years old. None of the coil turns have any noticeable sag or are touching. If I had to say, I would guess I used about 10-lb of tension as I laced the turns. The cross pieces are slightly bent from the lacing process, as I did nothing to prevent this, and they have not changed position in all that time. I took no precautions to allow for thermal expansion. The assembly has been quite forgiving of minor impacts and shows no signs of damage or deterioration.

I have a somewhat smaller loop I use on the lower end of the MW band. The frame is made from 3/4" stock which is notched instead of drilled to receive the wire. I used solid bare copper wire on it. Same result - no slack or damage for many years.

Bottom line: I would say seasoned wood has enough give to it to provide the required structural strength and flexibility for a long time, and there is not much need for any extraordinary precautions.

Bob

On 4/20/2015 9:47 AM, gnuarm.2007@... [loopantennas] wrote:
>
> I'm not an expert on the electronics of tuned loop antennas, but if
> you construct one with the wires taught and it becomes loose, that
> means your frame has changed shape or size. I know wood can change
> shape and size when the humidity changes and to a lesser extent when
> the temperature changes. You might consider a different material or
> perhaps use an adjustment on the frame that allows you to lengthen one
> of the arms to make it taught again. If you don't mind a bit of
> additional complexity, I can picture one arm with an elbow hinge in
> the middle and a turnbuckle to the adjacent arm to pull the elbow and
> lengthen the arm. Do they make plastic turnbuckles? I think a metal
> one might not be the best idea. If you can't buy a plastic one, you
> can always make one easily enough. It's just a block of plastic with
> tapped holes and a couple of screws.
>
> Rick
>

10961. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 15:41:23 UTC
From: Bob C
Topic: 10936 Message: 10961

You could probably use some precision laboratory equipment to determine the precise Q of various coils, or perhaps do a side-by-side test under controlled conditions - both beyond my capability. My thought with larger wire has always been the tradeoff you would reach with distributed capacitance. As stated earlier, I like to maximize the L/C ratio and operate the coil as close to its self-resonating frequency as possible. In that approach, distributed capacitance is wasted capacitance. Then too, fat wire adds weight.

Bob C.

On 4/20/2015 9:58 AM, gnuarm.2007@... [loopantennas] wrote:
>
> Without doing the calculations I would say at 150 kHz, the Q of an
> antenna using 22 ga wire is limited by the skin effect. I worked on a
> 60 kHz antenna using RG-6 coax which uses an 18 ga inner conductor and
> the skin effect was definitely in play. I couldn't easily change the
> gauge so I was fine with that. But with your antenna both the
> frequency is a lot higher while 22 ga is not a lot smaller than 18 ga,
> so a smaller wire could have been used with no ill effect on the antenna.
>
> The skin effect is not absolute. The profile of current is a smooth
> curve from the outside to the center. But once the radius of the wire
> passes the skin depth you are reaching a point of diminishing returns
> using fatter wires.
>
> Rick
>
> --

10962. Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 21:41:19 UTC
From: ktalbott@...
Topic: 10962 Message: 10962

I am considering building two mag loops using 1 inch hardline as the conductor. What is the opinion of this group regarding the use of hardline? I own it, I would have to purchase copper pipe.
tnx es 73 de ken ke4rg

10963. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-20 22:18:17 UTC
From: Will
Topic: 10936 Message: 10963

Thanks for thoughts.

Using pre-used wire, usually pretty thin maybe 24 gauge, it is difficult to get any tension in the wire. Add in the change in dimension of the wood used as frame it is very difficult to keep taut.

It doesn't have any effect on reception as the loop has to be tuned every time station is changed.

Its main problem is that it makes it very difficult to clean the dust off.

Slightly off topic I have used similar wire for a windom a/e. It survived several hits from small birds that I saw. It was made for about 1900khz but worked well as SWL a/e for all frequencies, BC upwards.

Cheers
Will.

On 21/04/15 03:04, jfarley44@... [loopantennas] wrote:
>
>
> Hey Will;
>
> All wire will stretch a bit with time, to various degrees, and will
> cause sagging in a loop. This is implicitly a restatement of the "Rope
> Around the Earth" problem, and it doesn't take very much wire stretch to
> distort the winding shape:
> http://mathforum.org/mathimages/index.php/Rope_around_the_Earth
>
> The question is: Do you feel that this is changing the loop performance,
> or is it a question of aesthetics?
>
> In either case, the suggestions offered by Rick will help.
> Alternatively, simply re-tensioning the wire by pulling it around the
> frame as a matter of routine maintenance may be all that's required for
> a loop which will primarily be used indoors, as seems to be your
> situation. At some point, the wire may settle down, and the stretch vs
> time should slow down for copper wire as it's cold worked.
>
> Loops which are permanently sited outdoors are a different matter. I
> have used remotely tuned outdoors loops for years, and twice a year PM
> is absolutely required here in Chicago. The wire here is generally 10
> AWG type TEW, and outdoor loops just seem to be a magnet for perching
> birds and flying squirrels (if the loop is sited near a tree). Windings
> are re-tensioned in the Spring and Fall, and just allowed to sag away
> between these PMs with very little noticeable effect on loop

> performance. By far, the bigger variations in performance (tuning range
> and Q) can be attributed to changes in temperature and humidity.
>
> Hope this helps, joe
>
>
>
>
>

10964. Added a link about calculating short, wide loops (width<<0.1diameter)

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-21 00:26:03 UTC
From: alienrelics@...
Topic: 10964 Message: 10964

RADIO-TIMETRAVELLER: Loop Calculations, Part 1
http://radio-timetraveller.blogspot.com/2011/12/loop-calculations-part-1.html

http://radio-timetraveller.blogspot.com/2011/12/loop-calculations-part-1.html

RADIO-TIMETRAVELLER: Loop Calculations, Part 1
http://radio-timetraveller.blogspot.com/2011/12/loop-calculations-part-1.html
RADIO-TIMETRAVELLER is a blog about radio and radio DXing, antennas, opinions, reviews - basically all things concerning radio - with a special emphasis on me...

View on radio-timetraveller.bl...
http://radio-timetraveller.blogspot.com/2011/12/loop-calculations-part-1.html
Preview by Yahoo

Found on the Ultralight DX group.

Steve Greenfield AE7HD

10965. Re: Wire for Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-21 02:30:55 UTC
From: caodwolf@...
Topic: 10943 Message: 10965

Thanks Tim for the good advice...

David T

10966. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-21 13:44:19 UTC
From: tenorman1952@...
Topic: 10936 Message: 10966

With a multiturn loop, as you pull tight and wind on more and more turns, the frame is compressed and previous windings become loose.

Solution, simply don't wind so tightly. Pull the wire just tight enough to avoid sagging.

Paul - AE5JU

10967. Re: [loopantennas] Re: Mag Loop Advice

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-21 17:25:15 UTC
From: Bob C
Topic: 10936 Message: 10967

Loose turns must be a problem unique to solenoid coils. I have never had difficulty with slack when winding spirals - the Stradivarius of loop antennas. I start with the outer turn and work inward. The first turns are adjusted to hold the cross pieces rigid at right angles. The result is a relatively rugged, compact, light-weight coil with low distributed capacitance.

Bob C.

On 4/21/2015 9:44 AM, tenorman1952@... [loopantennas] wrote:
>
> With a multiturn loop, as you pull tight and wind on more and more
> turns, the frame
> is compressed and previous windings become loose.
>
> Solution, simply don't wind so tightly. Pull the wire just tight
> enough to avoid sagging.
>
> Paul - AE5JU
>
>

10968. Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-21 21:38:37 UTC
From: gnuarm.2007@...
Topic: 10962 Message: 10968

I don't know much about using the hardline, but what is the copper tubing for? I have seen transmitter loops made entirely of copper pipe in order to maintain a high Q and carry large currents. But if you are using hardline why would you need the copper tubing?

Rick

10969. Re: [loopantennas] Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-21 21:49:25 UTC
From: Andy
Topic: 10962 Message: 10969

Rick wrote:

"But if you are using hardline why would you need the copper tubing?"

Presumably, he would if he could not use hardline. I think you misunderstood.

Andy

10970. Re: [loopantennas] Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-22 13:53:46 UTC
From: gnuarm.2007@...
Topic: 10962 Message: 10970

Yes, I see that now. Thanks. So no one has an opinion on using hardline for an antenna?

10971. Re: [loopantennas] Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-22 19:56:48 UTC
From: kevin asato
Topic: 10962 Message: 10971

Should work. I have done similar using small sniffer loops with RG-8 coax. you just need to cut a gap in the shield at the top as you would for a copper loop.
73,
kevin
kc6pob

On Wed, 4/22/15, gnuarm.2007@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

Subject: Re: [loopantennas] Re: Hardline as mag loop conductor
To: loopantennas@yahoogroups.com
Date: Wednesday, April 22, 2015, 6:53 AM

Yes, I see that now. Thanks. So no one has an
opinion on using hardline for an antenna?

10972. Re: [loopantennas] Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-22 22:04:59 UTC
From: Will
Topic: 10962 Message: 10972

Would you use the inner of the hardline as loop with the outer shield
cut at top as shield OR use the outer shield as the loop with inner not
connected. The larger diameter would more closely replicate copper tube.

Cheers,
Will

On 23/04/15 07:56, kevin asato kc6pob@... [loopantennas] wrote:
>
>
> Should work. I have done similar using small sniffer loops with RG-8
> coax. you just need to cut a gap in the shield at the top as you would
> for a copper loop.
> 73,
> kevin
> kc6pob
> ---
> On Wed, 4/22/15, gnuarm.2007@... [loopantennas]
> <loopantennas@yahoogroups.com> wrote:
>
> Subject: Re: [loopantennas] Re: Hardline as mag loop conductor
> To: loopantennas@yahoogroups.com
> Date: Wednesday, April 22, 2015, 6:53 AM
>
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> Yes, I see that now. Thanks. So no one has an
> opinion on using hardline for an antenna?
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10973. Re: [loopantennas] Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-22 22:09:20 UTC
From: Steve Ratzlaff
Topic: 10962 Message: 10973

Hi Will,
I've made receiving loops using 7/8" hardline. I used the outer shield as the conductor and ignored the inner, and as you noted, the outer is much larger diameter which is desirable.
73,
Steve AA7U

On 4/22/2015 3:04 PM, Will zl1tao@... [loopantennas] wrote:
>
> Would you use the inner of the hardline as loop with the outer shield
> cut at top as shield OR use the outer shield as the loop with inner not
> connected. The larger diameter would more closely replicate copper tube.
>
> Cheers,
> Will
>

10974. Re: [loopantennas] Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-23 00:51:07 UTC
From: Dick Bingham
Topic: 10962 Message: 10974

Hi

I would think that 1-inch CATV hardline will work fine as a loop antenna. Corrosion at
contact points may be problematic. I would recommend you make soldered connections
to the Aluminum.

To solder to the Aluminum all I do is apply some high-temperature grease to the surface
to be tinned to block Oxygen from the to-be-soldered region, scrape the surface below the
grease to remove existing oxidation and then use a BIG high-wattage soldering iron to
continuously scrape/heat the region to be soldered while feeding regular solder to the area
being tinned.

EVENTUALLY, you will build-up a solder-blob that is electrically and mechanically well
attached to the Aluminum. Once this is accomplished, you can easily solder copper wire to
the blob to make connections to connectors.

My experiments with soldered connections in a somewhat ocean-breezy influenced
environment showed no degradation of the joint after a year of being 'outside' in the WX.

73 - Dick/w7wkr CN98pi and CN97uj

On Mon, Apr 20, 2015 at 2:41 PM, ktalbott@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> I am considering building two mag loops using 1 inch hardline as the
> conductor. What is the opinion of this group regarding the use of
> hardline? I own it, I would have to purchase copper pipe.
>
> tnx es 73 de ken ke4rg
>
>
>

10975. Re: [loopantennas] Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-22 14:43:08 UTC
From: derf@...
Topic: 10962 Message: 10975

Using hardline for transmitting loops is very practical.
As with all Tx loops, high currents will flow on the outer surface so a large surface area is best.
Hardline is preferable to plumbing copper pipe because no soldered joints are required (except where the capacitor is connected), thus a lower resistance to high RF currents can be achieved.
Hardline is plastic coated copper so it is protected from corrosion.
Hardline is easy to bend into a loop and is rigid enough to keep its shape.
Best regards, Derf Mockford, G8ZGK

10976. Re: Hardline as mag loop conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-23 00:50:30 UTC
From: silvergak@...
Topic: 10962 Message: 10976

There are many options for loop conductors. Connecting the capacitor has been a major problem
for me. Connections of a few milli-ohms can destroy the Q of the loop.
Spencer W1GAK

10977. Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-29 23:43:48 UTC
From: Brian Burns
Topic: 10977 Message: 10977

Hello All,

Has anyone had any experience using a receiving loop with a regenerative ham receiver?

Regens have a real attraction since they are so simple to build. But, they are notorious for blocking and pulling in the presence of strong adjacent channel signals. It occurred to me this afternoon that the added selectivity and directionality of a high Q receiving loop might be a real advantage when used with a regen station receiver. Has anyone had any experience with this combination on the air?

Cheers,

Brian Burns Ex: W5BRO, K6UCD

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http://www.avast.com

10978. Re: [loopantennas] Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 00:38:05 UTC
From: BobC
Topic: 10977 Message: 10978

On 4/29/2015 7:43 PM, 'Brian Burns' brian@...
[loopantennas] wrote:
>
> Hello All,
>
> Has anyone had any experience using a receiving loop with a
> regenerative ham receiver?
>

Well, sort of. Not a receiver per se, but I have an active loop antenna for MW, which I built about 30 years ago. This is a center-tapped balanced ferrite core loop which feeds a dual FET amplifier. The amplifier is the one designed by Ralph Sanserino about 40 years ago. I think the FETs go into an emitter follower and go out to a low-impedance line to the receiver.

I modified Sanserino's circuit to provide some positive feedback (regeneration), which is controlled by a pot. Yes, it does what it's supposed to do, providing some extra gain and higher Q. I can't say it isn't overkill, but it's interesting.

Bob C.

> Regens have a real attraction since they are so simple to build. But,
> they are notorious for blocking and pulling in the presence of strong
> adjacent channel signals. It occurred to me this afternoon that the
> added selectivity and directionality of a high Q receiving loop might
> be a real advantage when used with a regen station receiver. Has
> anyone had any experience with this combination on the air?
>
> Cheers,
>
> Brian Burns Ex: W5BRO, K6UCD
>
>
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10979. Re: [loopantennas] Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 04:21:25 UTC
From: kevin asato
Topic: 10977 Message: 10979

Dan Wissell, N1BYT had an article in QST, The OCR II Receiver, which is pictured using a loop antenna if it helps. Original article was from September 2000 but is also in More QRP Power.
73,
kevin
kc6pob

On Wed, 4/29/15, 'Brian Burns' brian@lessonsinlutherie.com [loopantennas] <loopantennas@yahoogroups.com> wrote:

Subject: [loopantennas] Receiving loop and Regen?
To: loopantennas@yahoogroups.com
Date: Wednesday, April 29, 2015, 4:43 PM

Hello All, Has anyone had any experience using a receiving loop with a regenerative ham receiver? Regens have a real attraction since they are so simple to build. But, they are notorious for blocking and pulling in the presence of strong adjacent channel signals. It occurred to me this afternoon that the added selectivity and directionality of a high Q receiving loop might be a real advantage when used with a regen station receiver. Has anyone had any experience with this combination on the air? Cheers, Brian Burns Ex: W5BRO, K6UCD

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www.avast.com

10980. Re: [loopantennas] Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 10:00:29 UTC
From: John
Topic: 10977 Message: 10980

Well actually I designed the amplifier, not Ralph Sanserino. Ralph
manufactured and sold loop antennas with a wooden frame he designed.
Ralph, unfortunately, is no longer with us.
The original circuit is on my site
<http://www.jlkolb.cts.com/site/dif_fet.pdf>
I believe the circuit was first written up for publication
by Grant Manning in LWCA (Long Wave Club of America)

It would be interesting to see the regen modification.

John
kk6il@...

On 4/29/2015 5:38 PM, BobC dexterdxer@... [loopantennas] wrote:

> Well, sort of. Not a receiver per se, but I have an active loop antenna
> for MW, which I built about 30 years ago. This is a center-tapped
> balanced ferrite core loop which feeds a dual FET amplifier. The
> amplifier is the one designed by Ralph Sanserino about 40 years ago. I
> think the FETs go into an emitter follower and go out to a low-impedance
> line to the receiver.

> Bob C.

10981. Re: [loopantennas] Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 11:41:11 UTC
From: Dexter
Topic: 10977 Message: 10981

On 4/30/2015 6:00 AM, John jlkolb@... [loopantennas] wrote:
>
>
> Well actually I designed the amplifier, not Ralph Sanserino. Ralph
> manufactured and sold loop antennas with a wooden frame he designed.
> Ralph, unfortunately, is no longer with us.
> The original circuit is on my site
> <http://www.jlkolb.cts.com/site/dif_fet.pdf>
> I believe the circuit was first written up for publication
> by Grant Manning in LWCA (Long Wave Club of America)
>
> It would be interesting to see the regen modification.
>
John,

I was unaware of your involvement, and you are to be congratulated. The balanced, high-impedance input is the key and provides minimal load on the tuned circuit. Those amps work equally well on small ferrite loops. I also built one without regeneration for portable use.

Somewhere, I must have a sketch of what I did for regeneration, and will try to find it. We got busy raising kids, working, and all of the usual things, and it is only the past couple of years I have started to unpack my previous life.

Thinking about it, I doubt whether the feedback went all the way back to the loop. That might be the best way to go - perhaps to a small feedback coil on the ferrite.

I contributed to LWCA in its very early days. Corresponded with the late W.R. McIntosh.

Bob C.

10982. Re: [loopantennas] Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 11:55:44 UTC
From: John Maxwell
Topic: 10977 Message: 10982

On 04/29/2015 07:43:48 PM, 'Brian Burns' brian@...
[loopantennas] wrote:
> Hello All,
>
>
>
> Has anyone had any experience using a receiving loop with a
> regenerative ham
> receiver?
>
Ran across this a few years ago, and keep meaning to try it for myself
(so many things to investigate, and so little time...)

http://www.ke3ij.com/bigloop.htm

--
John Maxwell KB3VLL jmax@...

Nihilism is best done by professionals.
-Iggy Pop

10983. Re: [loopantennas] Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 12:44:18 UTC
From: pu3hag - h. garcia
Topic: 10977 Message: 10983

On Thursday, April 30, 2015, Maxwell wrote:

>
>

> (so many things to investigate, and so little time...)
>
>
All those equations for electromagnetism surely uses quite a bit of time to
develop

;c)

just kidding!

-- pu3hag huelbe

>
>

10984. Re: [loopantennas] Receiving loop and Regen?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 15:30:42 UTC
From: Steve
Topic: 10977 Message: 10984

Is this the same circuit as he used on his 'Radio West' ferrite bar loops, with changeable inductors? I have this version which used 5 ferrite bars which I later modified and added 4 more bars to, extending it to 22". I also have a smaller single bar one that he made, exclusively for the BCB. What was unique about these was his PCV alt / az mount which allowed the bar to be rotated in almost any direction for nulling....amazing little table-top antennas.

Steve

> Well actually I designed the amplifier, not Ralph Sanserino.

WEB - "The VE7SL Radio Notebook": http://members.shaw.ca/ve7sl

VE7SL BLOG - "Homebrewing and Operating Adventures From 2200m to Nanowaves": http://ve7sl.blogspot.ca/

10985. which loop to build with fewer re tunes

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-04-30 17:21:58 UTC
From: gail21@...
Topic: 10985 Message: 10985

hi
I am new to loop antennas and wish to ask those that have built mag loop antennas which gave good all round results with fewer re tunes of the cap.

areas I am focused on are either a double loop (one loop behind the other)
or a figure of eight loop with the tuning cap in the middle
I have 7/8ths copper tubing (22mm) which i have purchased on a roll and
also a vaccum variable capacitor 10-500pf

band coverage will be from 80 mtrs to 20mtrs which would be the best type of match a faraday loop or a gamma match has anyone built an auto gama match as well as tuning the capacitor?
any advice from constructors much appriciated
73s
G4XCP

10986. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-01 13:10:40 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 10986

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

10987. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-01 13:10:40 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 10987

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

10988. Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-03 18:50:54 UTC
From: Brian Burns
Topic: 10988 Message: 10988

Hello All,

As nobody seems to have any experience using a loop with a regenerative receiver (not surprisingly), let me put my question a different way. What sort of passive loop design has the highest Q?

I'm looking to the loop antenna to add some selectivity to a regenerative receiver by way of its directionality, and narrow bandwidth. So just the opposite from people that are looking for designs that don't need to be re-tuned very often as you change frequency, I'm looking for a design that needs to be retuned as often as possible!

Any suggestions would be greatly appreciated (:->).

P.S. I'm pretty capable with mechanical fabrication of things.

Cheers,

Brian Burns Ex: W5BRO, K6UCD

See my website: www.lessonsinlutherie.com

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http://www.avast.com

10989. Re: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-03 22:23:04 UTC
From: Richard (Rick) Karlquist
Topic: 10988 Message: 10989

Assuming you want 10 kHz bandwidth, the maximum
usable Q is only 54 at 540 kHz ranging up to
170 at 1.7 MHz. These Q's are fairly easy to
achieve if you make a shielded loop out of RG-59
video coax with a copper braid shield. Or of course
you could use hardline. The Q is more or less
independent of loop diameter, but is proportional
to conductor diameter.

Having said that, it is possible that selectivity
may be limited by reciprocal mixing due to phase noise
on the "oscillator". A regenerative receiver is an
oscillator. It is not clear whether the loop antenna
is going to be the tank for this receiver, or if there
will be a separate tank. I believe that this tank
has a similar Q limit, but I don't know much about
regenerative receivers. In any event, it is trival
to achieve the Q's I mentioned above using a Fair-Rite
toroidal core with 61 material.

Rick N6RK

On 5/3/2015 11:50 AM, 'Brian Burns' brian@...
[loopantennas] wrote:
> Hello All,
>
> As nobody seems to have any experience using a loop with a regenerative
> receiver (not surprisingly), let me put my question a different way.
> What sort of passive loop design has the highest Q?
>
> I?m looking to the loop antenna to add some selectivity to a
> regenerative receiver by way of its directionality, and narrow
> bandwidth. So just the opposite from people that are looking for designs
> that don?t need to be re-tuned very often as you change frequency, I?m
> looking for a design that needs to be retuned as often as possible!
>
> Any suggestions would be greatly appreciated (:->)?
>
> P.S. I?m pretty capable with mechanical fabrication of things.
>
> Cheers,
>
> Brian Burns Ex: W5BRO, K6UCD
>
> See my website: www.lessonsinlutherie.com <http://www.lessonsinlutherie.com>
>

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> ----------
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10990. RE: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-03 23:41:46 UTC
From: Brian Burns
Topic: 10988 Message: 10990

Hello Rick,

Thanks for the reply to my query!

I'm thinking mainly of 40 meters and up to 15 meters. The receiver that I'm planning will have at least one RF stage, so the detector will be isolated from the antenna by that. There is even the possibility of a separate BFO so that the detector won't have to go into oscillation to receive CW.

Regen's are intriguing for home brewers because they are simpler than superhets, and you don't have to worry about birdies and images, and finding IF transformers. But---they are notorious for blocking and locking onto strong signals in adjacent channels. A high Q loop could provide some additional selectivity up front, and of course if you are lucky enough to have the guy you want to hear, be in a different direction from the interfering station...

So, anything I can do to increase the Q of a small loop up in the bands I mention will be all to the good. I'm willing to put up with having to retune the antenna frequently.

Thanks again!

73,

Brian

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http://www.avast.com

10991. Re: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 00:20:17 UTC
From: Richard (Rick) Karlquist
Topic: 10988 Message: 10991

You should probably use hardline for the loop.
As the loop perimeter approaches 1/3 of a
wavelength, the Q will be limited to a few
hundred due to the radiation resistance
becoming significant, IE an ohm or two.
If you tune with varactors, they will probably
be the limiting factor on Q.

In terms of making high Q inductors, my experience
with a Q meter was that on one occasion, I was
able to pin the meter at Q=1000, using a 6 inch
diameter coil at 14 MHz. That was my "personal
best" at building inductors. Loops tend to have less
Q. In general, you rarely see a measured Q at HF
much above 500. QST had an article called "field
day filters" about 40 years ago that used helical
resonators. You are probably better off doing that
rather than trying to get "free" filtering with a
loop antenna.

Rick N6RK

On 5/3/2015 4:41 PM, 'Brian Burns' brian@...
[loopantennas] wrote:
> Hello Rick,
>
> Thanks for the reply to my query!
>
> I'm thinking mainly of 40 meters and up to 15 meters. The receiver that I'm
> planning will have at least one RF stage, so the detector will be isolated
> from the antenna by that. There is even the possibility of a separate BFO so
> that the detector won't have to go into oscillation to receive CW.
>
> Regen's are intriguing for home brewers because they are simpler than
> superhets, and you don't have to worry about birdies and images, and finding
> IF transformers. But---they are notorious for blocking and locking onto
> strong signals in adjacent channels. A high Q loop could provide some
> additional selectivity up front, and of course if you are lucky enough to
> have the guy you want to hear, be in a different direction from the
> interfering station...
>
> So, anything I can do to increase the Q of a small loop up in the bands I
> mention will be all to the good. I'm willing to put up with having to retune
> the antenna frequently.
>
> Thanks again!

>
> 73,
>
> Brian
>
> ---
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>

10992. Re: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 00:21:07 UTC
From: Dexter
Topic: 10988 Message: 10992

I think you're on the right track, Brian. I have some small loops working reasonably well up to 23 MHz. I find that the Q is high enough to significantly reduce or eliminate strong image signals on old single-conversion "boat anchors." In other words, what would be a 910 kHz image is well outside the bandwidth of the antenna. That may be a good test.

The key to high Q is to minimize the load on the primary tuned circuit. Imagine an ideal L/C circuit resonating freely in space with no load. In practice, you can approach that by using a relatively small and properly placed pickup coil which is also matched to the impedance of the transmission line to the receiver. I do this with switch-selectable turns on the pickup coil, which matches the impedance at various points along the tuning range of the primary circuit.

In /*theory*/, wire size affects Q to the extent that larger wire has lower resistance at resonance. However, in /*practice*/, considering the relatively short length of wire involved, I have not found wire size to make much difference. I think I reported here that my LW loop consisting of approximately 147 ft of 22 AWG stranded wire must be retuned every 1 kHz. That's high Q.

Expect the bandwidth to increase with frequency. At 15 MHz, it may be on the order of 100 to 200 kHz. That does not necessarily mean the Q is low.

Regards,

Bob C.

On 5/3/2015 7:41 PM, 'Brian Burns' brian@...
[loopantennas] wrote:
>
> Hello Rick,
>
> Thanks for the reply to my query!
>
> I'm thinking mainly of 40 meters and up to 15 meters. The receiver
> that I'm
> planning will have at least one RF stage, so the detector will be isolated
> from the antenna by that. There is even the possibility of a separate
> BFO so
> that the detector won't have to go into oscillation to receive CW.
>
> Regen's are intriguing for home brewers because they are simpler than
> superhets, and you don't have to worry about birdies and images, and

> finding
> IF transformers. But---they are notorious for blocking and locking onto
> strong signals in adjacent channels. A high Q loop could provide some
> additional selectivity up front, and of course if you are lucky enough to
> have the guy you want to hear, be in a different direction from the
> interfering station...
>
> So, anything I can do to increase the Q of a small loop up in the bands I
> mention will be all to the good. I'm willing to put up with having to
> retune
> the antenna frequently.
>
> Thanks again!
>
> 73,
>
> Brian
>
> ---
> This email has been checked for viruses by Avast antivirus software.
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>
>

10993. RE: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 06:29:50 UTC
From: qrp.gaijin@...
Topic: 10988 Message: 10993

In loopantennas@yahoogroups.com, <brian@...> wrote :

> I'm thinking mainly of 40 meters and up to 15 meters.
[...]
> Regen's [...] are notorious for blocking and locking onto
> strong signals in adjacent channels. A high Q loop could
> provide some additional selectivity up front

Not to be a wet blanket, but if you're aiming to increase the ability of a regenerative receiver to receive weak signals in the presence of "strong signals in adjacent channels", I'm afraid a loop antenna won't do much for you. There's just no way you can build a single tuned circuit (which is what a loop antenna is) in front of the regen that can be sharp enough to give you single-signal selectivity. You might get some very mild improvement against the strongest signals in far-away adjacent channels, but for strong signals a few kHz away I don't think you're going to be satisfied.

It might be fun to play with, but I don't think you're heading down a path that will actually lead to high performance. If your goal is really to improve performance, consider a traditional superhet architecture and see these post by Dave Newkirk:
https://groups.yahoo.com/neo/groups/regenrx/conversations/messages/23026
https://groups.yahoo.com/neo/groups/regenrx/conversations/messages/23026 ,
https://groups.yahoo.com/neo/groups/regenrx/conversations/messages/23027
https://groups.yahoo.com/neo/groups/regenrx/conversations/topics/19210

Have fun,
qrp.gaijin@yahoo.com
http://qrp-gaijin.blogspot.com http://qrp-gaijin.blogspot.com

10994. Re: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 12:50:05 UTC
From: gnuarm.2007@...
Topic: 10988 Message: 10994

Why would a pickup coil present any less load to the antenna than another properly matched attachment? Is this just a practical issue of being the easiest way to match the load?

10995. Re: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 15:07:26 UTC
From: Bob C
Topic: 10988 Message: 10995

What other coupling method were you thinking of - possibly a series-resonant circuit connected directly to a transmission line? In that case, the characteristic impedance of the transmission line is in the circuit and would contribute to the total resistance at resonance, thereby lowering the Q.

The coil in a "freewheeling" L/C primary circuit forms a transformer with the isolated pickup coil and there is no "load match" to speak of, just the degree of coupling you want to achieve. My experience is that there is a "sweet spot" where increased coupling significantly begins to degrade Q.

Bob C.

On 5/4/2015 8:50 AM, gnuarm.2007@... [loopantennas] wrote:
>
> Why would a pickup coil present any less load to the antenna than
> another properly matched attachment? Is this just a practical issue
> of being the easiest way to match the load?
>
>

10996. RE: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 15:36:45 UTC
From: Brian Burns
Topic: 10988 Message: 10996

Hello Rick,

"QST had an article called "field day filters" about 40 years ago that used helical resonators. You are probably better off doing that rather than trying to get "free" filtering with a loop antenna."

Thanks for the excellent tip! I had seen something about "Helical Resonators" a couple of years ago, but no details. QST April 1973 is the location of the article.

I've had something of the same idea with the design of an antenna tuner with large, high Q coils made from copper tubing. I've got plenty of space for one, and it would certainly look appropriate for a retro appearing regenerative receiver! Also, regens are famous for gain and sensitivity, so insertion loss would not be a problem.

Thanks again!

Cheers,

Brian

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

10997. Re: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 15:51:06 UTC
From: gnuarm.2007@...
Topic: 10988 Message: 10997

I don't recall the details, but I have seen coupling circuits using capacitors and I think I have seen at least one using a balun. The impedance of the transmission line will never lower the Q other than through the dielectric dissipation or wire resistance. The Q of an antenna is the ratio of the reactive component to the dissipative component. Reactive components can't dissipate (other than parasitic effects) so they can't lower the Q.

There is nothing magical about a pickup coil. The receiver still constitutes a load and will affect the Q of the antenna if enough power is drawn. A transformer is *exactly* a load matching circuit or more correctly an impedance matching circuit. I'm not so familiar with the coupling aspects, but I expect a looser coupling results in a lower percentage of the power being transferred to the receiver (not a good effect) resulting in less impact on the antenna Q (a good effect). I suppose there is a happy medium somewhere giving max voltage to the receiver.

I seem to recall there was a web page or document available on the web with several loop antenna coupling circuit examples which were from the ARRL handbook.

Rick

---In loopantennas@yahoogroups.com, <dexterdxer@...> wrote :

What other coupling method were you thinking of - possibly a series-resonant circuit connected directly to a transmission line? In that case, the characteristic impedance of the transmission line is in the circuit and would contribute to the total resistance at resonance, thereby lowering the Q.

The coil in a "freewheeling" L/C primary circuit forms a transformer with the isolated pickup coil and there is no "load match" to speak of, just the degree of coupling you want to achieve. My experience is that there is a "sweet spot" where increased coupling significantly begins to degrade Q.

Bob C.

On 5/4/2015 8:50 AM, gnuarm.2007@... mailto:gnuarm.2007@... [loopantennas] wrote:

Why would a pickup coil present any less load to the antenna than another properly matched attachment? Is this just a practical issue of being the easiest way to match the load?

10998. RE: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 15:50:59 UTC
From: Brian Burns
Topic: 10988 Message: 10998

~It might be fun to play with, but I don't think you're heading down a path that will actually lead to high performance. If your goal is really to improve performance, consider a traditional superhet architecture and see these post by Dave Newkirk:
https://groups.yahoo.com/neo/groups/regenrx/conversations/messages/23026 ,
https://groups.yahoo.com/neo/groups/regenrx/conversations/messages/23027
<https://groups.yahoo.com/neo/groups/regenrx/conversations/topics/19210>

I’m a great fan of Dave Newkirk’s, and have gotten the same advice directly from him. I have an HBR-11 just waiting to be rebuilt, and an HQ-150 that is in good working condition. Still, the regen has its attractions:

“Regen's are intriguing for home brewers because they are simpler than superhets, and you don't have to worry about birdies and images, and finding IF transformers.”

Rick’s suggestion of “Helical Resonators”---essentially high Q antenna tuners---seems a likely way to get some selectivity up front, and have Byron Goodman smile upon me from up in ham heaven.

Cheers,

Brian

This email has been checked for viruses by Avast antivirus software.
http://www.avast.com

10999. Re: [loopantennas] Highest Q loop configuration

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-04 17:19:16 UTC
From: Bob C
Topic: 10988 Message: 10999

Has anyone ever tried to use the 2-turn pickup coil on an Eton/Grundig/Tecsun AN-200? It's wound directly under the primary coil. I'm not sure what was intended, but it's a good example of what happens when you overload the primary resonant circuit - very low Q.

Bob C.

On 5/4/2015 11:51 AM, gnuarm.2007@... [loopantennas] wrote:
> There is nothing magical about a pickup coil. The receiver still
> constitutes a load and will affect the Q of the antenna if enough
> power is drawn. A transformer is *exactly* a load matching circuit
> or more correctly an impedance matching circuit. I'm not so familiar
> with the coupling aspects, but I expect a looser coupling results in a
> lower percentage of the power being transferred to the receiver (not a
> good effect) resulting in less impact on the antenna Q (a good
> effect). I suppose there is a happy medium somewhere giving max
> voltage to the receiver.

11000. gamma match, faraday

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-07 14:23:20 UTC
From: gail21@...
Topic: 11000 Message: 11000

would like to ask the group for information on examples of the thickness of material for both the Faraday section of the magloop or the gamma match thickness in relation to the main loop size.
is there a formula for the thickness of coaxial cable used in a faraday. for example if the main loop has a diameter of 22mm or 7/8ths is this factored into the calculation of the matching smaller loop that has the coaxial socket on it?
same question with the gamma? does the thickness of the faraday have any bearing on tx bandwidth?
hope this makes some sense, there are plenty of calculations for the main part of the loop but very little on the smaller section?

73s g4xcp

11001. loop skywire tuner problem

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-28 11:25:52 UTC
From: PETER CLEALL
Topic: 11001 Message: 11001

Hi until last month (for about 5 yrs) I have used a 23m longwire with a MFJ-971 tuner into an IC7000 with no problems. Except on a couple of occasions the vswr went unstable. This was fixed by operating the coil tap switch, which seemed to bring it back. I recently turned the longwire into a 50m diamond shaped loop sky wire at 6m height. I connected to the tuner with 3m open feeder from one corner. I connected this to the balanced feed to the 4:1 balun on the MFJ971.
All bands gave reasonable VSWR.

Last night I was setting up to operate on 80m i had a strong smell of burning and found that the switch tag to the coil was floating in a pool of burnt switch insulation. The vswr was too large to use.

This raises a few questions.

1. Have i designed and /or connected the loop sky wire in an incorrect way.

2. Are individual MFJ components available to purchase.

3. what simple tests can be done next time before using it to Tx. I do *not* have access to any fancy antenna analysers

regards
peter G8AFN

11002. loop sky wire tuner problems

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-28 18:53:33 UTC
From: peter.cleall@...
Topic: 11002 Message: 11002

Hi until last month (for about 5 yrs) I have used a 23m longwire with a MFJ-971 tuner into an IC7000 with no problems. Except on a couple of occasions the vswr went unstable. This was fixed by operating the coil tap switch, which seemed to bring it back. I recently turned the longwire into a 50m diamond shaped loop sky wire at 6m height. I connected to the tuner with 3m open feeder from one corner. I connected this to the balanced feed to the 4:1 balun on the MFJ971.
All bands gave reasonable VSWR.

Last night I was setting up to operate on 80m i had a strong smell of burning and found that the switch tag to the coil was floating in a pool of burnt switch insulation. The vswr was too large to use.

This raises a few questions.

1. Have i designed and /or connected the loop sky wire in an incorrect way.

2. Are individual MFJ components available to purchase.

3. what simple tests can be done next time before using it to Tx. I do not have access to any fancy antenna analysers

regards

peter G8AFN

11003. Re: loop sky wire tuner problems

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-29 12:18:47 UTC
From: sal.cerda@...
Topic: 11002 Message: 11003

How much power were you pushing through that tuner?
Sal

11004. Re: [loopantennas] Re: loop sky wire tuner problems

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-05-29 21:11:55 UTC
From: PETER CLEALL
Topic: 11002 Message: 11004

Hi Sal,
about 45 w carrier, which is the same as I have used for last 5 years.

regards peter

On 29 May 2015 at 13:18, sal.cerda@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> How much power were you pushing through that tuner?
> Sal
>
>
>

11005. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-01 13:28:44 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11005

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11006. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-01 13:28:44 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11006

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11007. Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-02 20:25:22 UTC
From: ell_vis@...
Topic: 11007 Message: 11007

Hi all,
I haven't been able to find any old topics about this on the forum. I'm sure there is a way to access that but this is what I'm looking for. I would like input on all available Magnetic loops (reasonable cost) that are sold retail, like the best performance for the buck, most HF freq bands, ease of use, easiest to hide for HOA and appear to work the best or maybe something as simple as a place on this sight that already did some comparisons. Even if you say, we can't help you here thats not what we do.
Either way Thank You All,
Jerry
P.S. I'm new here and thanks for letting me be in the group.

11008. Re: [loopantennas] Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-03 02:42:21 UTC
From: Andy
Topic: 11007 Message: 11008

There is another group, at least one other, about just Magloop antennas. This group is more general. I know you are talking about Magloops, but do you mean those for transmitting, or just reception?

This group (like most others) is composed of individuals, so you'd be asking for opinions of those individuals, not a group consensus. My observation on this is that the vast majority of people who have bought something commercial tend to favor what they bought, or at most have compared two brands, but usually not more. It is uncommon for someone to have tried half a dozen different models of something like a Magloop antenna.

But I could be wrong.

(Me, I like to build things myself. But I haven't done much of that lately. It's on my list.)

Andy

11009. Re: [loopantennas] Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-03 17:17:39 UTC
From: Richard (Rick) Karlquist
Topic: 11007 Message: 11009

On 6/2/2015 1:25 PM, ell_vis@... [loopantennas] wrote:
> Hi all,
>
> I haven't been able to find any old topics about this on the forum.
> I'm sure there is a way to access that but this is what I'm looking for.
> I would like input on all available Magnetic loops (reasonable cost)
> that are sold retail, like the best performance for the buck, most HF
> freq bands, ease of use, easiest to hide for HOA and appear to work the
> best or maybe something as simple as a place on this sight that already
> did some comparisons. Even if you say, we can't help you here thats not
> what we do.

It sounds like you are asking about transmitting loops. The physics of transmitting loops are very discouraging, and no vendor is going to change the laws of physics. The loop efficiency and bandwidth will both be dominated by size. The bigger loop will always win. Make the biggest loop you can out of "invisible" wire that will work for your HOA. Ignore marketing claims for smaller loops made out of large tubing, copper strap, helical windings, etc. Bigger is better, up to a conductor length of one-third of a wavelength. (Above that, the loop acts something like a Moxon dipole).

I have a big screwdriver antenna with a 102 inch CB whip on top of the coil on my van that I would venture to say would outperform any loop you can buy. If I lived in an HOA, I would just operate from my van and/or run a coax line from the van to the house and use the van antenna from the house.

Rick N6RK

11010. RE: [loopantennas] Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 01:09:02 UTC
From: Jerry Haun
Topic: 11007 Message: 11010

Thanks Rick,

It just seems like the loop should work being in a small space like an attic, the say YouTube never lies about their videos.:) I have given thought to the idea of a screwdriver antenna but I think I would have to weld a mount to the undercarriage of my small car and only use it when I can. That’s why I’m trying to set it up as a base station and leave it connected all the time. I still maybe need to trade or sell my Yaesu FT-100MP and buy something a little more light weight in a portable. Thanks for the advice I will keep it in mind.

Jerry - no sign yet

11011. Re: [loopantennas] Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 01:59:09 UTC
From: Richard (Rick) Karlquist
Topic: 11007 Message: 11011

For an attic, put two screwdriver antennas back to back
to make a dipole. Hi Q antennas even has fixtures
to do this.

Rick N6RK

On 6/3/2015 6:09 PM, 'Jerry Haun' ell_vis@... [loopantennas] wrote:
> Thanks Rick,
>
> It just seems like the loop should work being in a small space like
> an attic, the say YouTube never lies about their videos.JI have given
> thought to the idea of a screwdriver antenna but I think I would have to
> weld a mount to the undercarriage of my small car and only use it when I
> can. That’s why I’m trying to set it up as a base station and leave it
> connected all the time. I still maybe need to trade or sell my Yaesu
> FT-100MP and buy something a little more light weight in a portable.
> Thanks for the advice I will keep it in mind.
>
> Jerry - no sign yet
>
>

11012. Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 13:15:46 UTC
From: tenorman1952@...
Topic: 11012 Message: 11012

I've built small receiving loops, and know how the size and number of turns affects them. But I've taken an interest in the "skywave loop".

This may have been asked and answered before, and I missed it, but please bear with me and allow me to ask again.

What happens when a full wave loop, a single turn around say, 280' around (full wave on 80 meters) is doubled back, so instead of a rectangle 70' on each side for 280' total, it is now two turns with 35' on each side?

How does this affect impedance?

Any other effects I should be aware of?

The reason is, of course, the 70' on a side rectangle will not fit in my yard, but a smaller loop would fit.

73,
Paul - AE5JU

11013. Re: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 15:46:10 UTC
From: Andy
Topic: 11012 Message: 11013

I think I've mentioned this before, though I should point out that this is a mental exercise and I don't have the theoretical proof to back it up.

Small (i.e., "magnetic loop") multi-turn loops work because the length of wire is much smaller than a wavelength, so the current in each turn is the same and in-phase. The effects of the turns add to one another.

Larger loops don't do that. If you take 1 wavelength of wire and loop it into a 2-turn loop with a 1/2 wavelength circumference, the current in each turn is exactly opposite to (180 degrees out of phase with) the other turn. This would tend to make their effects cancel, rather than add. I think.

But, with antennas, it never hurts to try.

I did do a series of EZNEC simulations some time ago, trying 2-turn and multi-turn loops that were less than a wavelength in size but not considered "small" loops. (Trying to fit a loop antenna into a small lot.) The results were so disappointing that I did not pursue it further.

Andy

11014. RE: [loopantennas] Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 16:38:11 UTC
From: Jerry Haun
Topic: 11007 Message: 11014

Thanks again Rick,

For what I know, which I'm trying to learn, If I live in a house that faces south the Dipole setup would be for a North / South direction. I guess you couldn't complain but would it affect my west and east coast contacts if I live in the Midwest (Kansas City)?

Jerry

For an attic, put two screwdriver antennas back to back
to make a dipole. Hi Q antennas even has fixtures
to do this.

Rick N6RK

On 6/3/2015 6:09 PM, 'Jerry Haun' ell_vis@... <mailto:ell_vis@...> [loopantennas] wrote:
> Thanks Rick,
>
> It just seems like the loop should work being in a small space like
> an attic, the say YouTube never lies about their videos.JI have given
> thought to the idea of a screwdriver antenna but I think I would have to
> weld a mount to the undercarriage of my small car and only use it when I
> can. That's why I'm trying to set it up as a base station and leave it
> connected all the time. I still maybe need to trade or sell my Yaesu
> FT-100MP and buy something a little more light weight in a portable.
> Thanks for the advice I will keep it in mind.
>
> Jerry - no sign yet
>
>

11015. Re: [loopantennas] Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 16:54:36 UTC
From: Richard (Rick) Karlquist
Topic: 11007 Message: 11015

Of course a non rotatable dipole, especially in an attic, is
a compromise. It is even more compromised if you load it
up on bands where it is more than a half wave. Then you
get narrow lodes interlaced with nulls. On 40 and 80
meters, a low dipole tends to be almost omnidirectional.
I used to have a low dipole that ran north and south
(ie beaming east and west) but on 80 meters it got out
extremely well to the north and south.

Rick N6RK

On 6/4/2015 9:38 AM, 'Jerry Haun' ell_vis@... [loopantennas] wrote:
> Thanks again Rick,
>
> For what I know, which I'm trying to learn, If I live in a house
> that faces south the Dipole setup would be for a North / South
> direction. I guess you couldn't complain but would it affect my west and
> east coast contacts if I live in the Midwest (Kansas City)?
>
> Jerry
>
> For an attic, put two screwdriver antennas back to back
> to make a dipole. Hi Q antennas even has fixtures
> to do this.
>
> Rick N6RK
>
> On 6/3/2015 6:09 PM, 'Jerry Haun' ell_vis@...
> <mailto:ell_vis@...> [loopantennas] wrote:
> > Thanks Rick,
> >
> > It just seems like the loop should work being in a small space like
> > an attic, the say YouTube never lies about their videos.JI have given
> > thought to the idea of a screwdriver antenna but I think I would have to
> > weld a mount to the undercarriage of my small car and only use it when I
> > can. That's why I'm trying to set it up as a base station and leave it
> > connected all the time. I still maybe need to trade or sell my Yaesu
> > FT-100MP and buy something a little more light weight in a portable.
> > Thanks for the advice I will keep it in mind.
> >
> > Jerry - no sign yet
> >
> >
>
>

11016. RE: [loopantennas] Commercial magnetic loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 18:30:29 UTC
From: Jerry Haun
Topic: 11007 Message: 11016

OK, thanks a lot Rick, I'm going to look at a couple of screw antennas next week along with some attachments to put them together. I hope I still have an arm left after losing a arm and leg. I think this could really get expensive but I hope not. Thanks again Rick.

Jerry

11017. Re: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 21:51:50 UTC
From: Don Sanders
Topic: 11012 Message: 11017

I haven't tried the 2 turn loop yet. However, SGC says in their book that a
2 turn loop works with their tuners. Also a 3 or 4 turn loop but that is ,
I suspect, going to limit how well over 2 turns.
CEBIK also wrote about a IL-ZX two turn loop for 40 meters. Although his
two turn loop was basically a folded dipole fed back on itself in a loop
but fed on opposite sides at the feed point- thus it had a twist.
I plan a 2 turn loop for 40 meters(18 foot on a side) to try to improve
reception. I will also try it on transmit.
Anything to decrease the received noise, thus better signal to noise ratio.

Dr. Don HC4/W4BWS

On Thu, Jun 4, 2015 at 8:15 AM, tenorman1952@yahoo.com [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> I've built small receiving loops, and know how the size and number of
> turns affects them. But I've taken an interest in the "skywave loop".
>
> This may have been asked and answered before, and I missed it, but please
> bear with me and allow me to ask again.
>
> What happens when a full wave loop, a single turn around say, 280' around
> (full wave on 80 meters) is doubled back, so instead of a rectangle 70' on
> each side for 280' total, it is now two turns with 35' on each side?
>
> How does this affect impedance?
>
> Any other effects I should be aware of?
>
> The reason is, of course, the 70' on a side rectangle will not fit in my
> yard, but a smaller loop would fit.
>
> 73,
> Paul - AE5JU
>
>
>
>

11018. RE: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 21:59:23 UTC
From: Brian Burns
Topic: 11012 Message: 11018

Hello Dr. Don,

By all means keep us informed on this one! I've had the exact same idea for quieter receiving, but mainly for some directional gain on both TX and RX.

My shack is located at the very narrow end of a triangular lot that restricts conventional antennas to broad-siding in a north-south direction, and living on California's north coast a mile from the Pacific I would like to be able to work toward the east.

Cheers,

Brian

I haven't tried the 2 turn loop yet. However, SGC says in their book that a 2 turn loop works with their tuners. Also a 3 or 4 turn loop but that is , I suspect, going to limit how well over 2 turns.

CEBIK also wrote about a IL-ZX two turn loop for 40 meters. Although his two turn loop was basically a folded dipole fed back on itself in a loop but fed on opposite sides at the feed point- thus it had a twist.

I plan a 2 turn loop for 40 meters(18 foot on a side) to try to improve reception. I will also try it on transmit.

Anything to decrease the received noise, thus better signal to noise ratio.

Dr. Don HC4/W4BWS

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How does this affect impedance?

Any other effects I should be aware of?

The reason is, of course, the 70' on a side rectangle will not fit in my yard, but a smaller loop would fit.

73,
Paul - AE5JU

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11019. RE: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-04 23:32:01 UTC
From: Phillips
Topic: 11012 Message: 11019

Paul,
You might like to use the free antenna simulator program mmana-gal to try out various antenna configurations. It can show you the impedance, gain and propagation pattern of the antenna dimensions you enter.
It is available at http://hamsoft.ca/pages/mmana-gal.php

Ray

COLEMAK The keyboard layout for rational thinkersAvailable for Windows, Mac, Linux & AndroidTraining at http://thetypingcat.com/course/colemak

To: loopantennas@yahoogroups.com
From: loopantennas@yahoogroups.com
Date: Thu, 4 Jun 2015 06:15:46 -0700
Subject: [loopantennas] Multi Turn Loops

I've built small receiving loops, and know how the size and number of turns affects them. But I've taken an interest in the "skywave loop".

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73,
Paul - AE5JU

11020. Re: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-05 02:19:06 UTC
From: Myamiphil
Topic: 11012 Message: 11020

Ive used that trick at work... in the field with antenna runs.... When there was too much cable... you would make it into a loop... however, when you are up at higher frequencies the coil becomes an significant inductance.... To cancel out the loop you take the large loop and twist into a figure eight and fold it over on itself. Half the coil running one way and half running the other way cancels out the inductance of the coil and whatever effect it had on the frequency in question... In this case it was around 608 - 614 MHz. Medical telemetry.
I guess twisting a large loop into a figure 8 and folding it cancels out noise?? Best Regards Phil
KD2HTN / AG
Lat: 40.8367633 Long: -74.1768412

From: "Don Sanders w4bws1@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Thursday, June 4, 2015 5:51 PM
Subject: Re: [loopantennas] Multi Turn Loops

I haven't tried the 2 turn loop yet. However, SGC says in their book that a 2 turn loop works with their tuners. Also a 3 or 4 turn loop but that is , I suspect, going to limit how well over 2 turns.CEBIK also wrote about a IL-ZX two turn loop for 40 meters. Although his two turn loop was basically a folded dipole fed back on itself in a loop but fed on opposite sides at the feed point- thus it had a twist.I plan a 2 turn loop for 40 meters(18 foot on a side) to try to improve reception. I will also try it on transmit. Anything to decrease the received noise, thus better signal to noise ratio.
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73,
Paul - AE5JU

11021. RE: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-05 03:48:02 UTC
From: tenorman1952@...
Topic: 11012 Message: 11021

Thanks, Ray. I had tried a few other antenna analysis programs, but none showed how to enter anything into them, that is, how to draw in an antenna and make the program work. Never figured out how to use the programs. Talking about EZ-NEC and one from South America that sent me a beta and keep wanting me to use the program. I'd like to, don't know how.

I'd appreciate someone showing me how to make these programs actually work.

Paul - AE5JU

11022. Re: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-05 05:31:22 UTC
From: vk2tti@...
Topic: 11012 Message: 11022

PS to the bit on the garage loop. I also made a two turn transmitting loop for 20m. Tuned using a MFJ-936B loop tuner. The turns were made from two, one metre, lengths of aluminium strip 12mm x 3mm cross connected to form a two turn loop, also works well. further regards Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
04 Jun 2015 06:15:46 -0700
Subject:
[loopantennas] Multi Turn Loops

I've built small receiving loops, and know how the size and number of turns affects them. But I've taken an interest in the "skywave loop".

This may have been asked and answered before, and I missed it, but please bear with me and allow me to ask again.

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73,
Paul - AE5JU

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11012;_ylc=X3oDMTJ

ybmNobnY1BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTAxMgRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0MzM0MjM3NDY-?act=reply&messageNum=11012
[2] mailto:tenorman1952@...?subject=Re%3A%20Multi%20Turn%20Loops
[3] mailto:loopantennas@yahoogroups.com?subject=Re%3A%20Multi%20Turn%20Loops
[4] https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmY29kbXYyBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0MzM0MjM3NDY-
[5] https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11012;_ylc=X3oDMTM3dGt0ajEzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTAxMgRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0MzM0MjM3NDYEdHBjSWQDMTEwMTI-
[6] http://groups.yahoo.com/group/loopantennas/links
[7] http://groups.yahoo.com/group/loopantennas/files
[8] http://ph.groups.yahoo.com/group/loopantennas/photos
[9] https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmOWNqMHY4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0MzM0MjM3NDY-
[10] https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnZnFsdGdvBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDMzNDIzNzQ2
[11] https://groups.yahoo.com/neo;_ylc=X3oDMTJlYThjamlsBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQzMzQyMzc0Ng--
[12] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[13] mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[14] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11024. Foxhole radio

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-05 11:26:41 UTC
From: bcarusella@...
Topic: 11024 Message: 11024

Does anyone on here know how to get in contact with Mark Huss, who used to post on here fairly frequently as mhatlau? He posted something several years ago about a foxhole radio his uncle built during WWII
and I would like to ask him more about it
Thanks

Brian

11025. Re: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-05 05:23:20 UTC
From: vk2tti@...
Topic: 11012 Message: 11025

G'day Paul. I have, hung in the vertical plane, on the side of my garage, a loop 6metresx2metres using twin core speaker cable, connected to produce a two turn loop. It can be used tuned or untuned. Its null is east/west and receives north/south up and down the New South Wales coast. Receives the HF signals from the Sydney to Hobart Yacht Race at armchair quality, you can almost smell the salt air HiHi. Seriously it works well. Give it a go. Regards Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
04 Jun 2015 06:15:46 -0700
Subject:
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[2] mailto:tenorman1952@...?subject=Re%3A%20Multi%20Turn%20Loops
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https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmY29kbXYyBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0MzM0MjM3NDY-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11012;_ylc=X3oDMTM3dGt0ajEzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTAxMgRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0MzM0MjM3NDYEdHBjSWQDMTEwMTI-
[6] http://groups.yahoo.com/group/loopantennas/links
[7] http://groups.yahoo.com/group/loopantennas/files
[8] http://ph.groups.yahoo.com/group/loopantennas/photos
[9]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmOWNqMHY4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0MzM0MjM3NDY-
[10]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnZnFsdGdvBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDMzNDIzNzQ2
[11]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlYThjamlsBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQzMzQyMzc0Ng--
[12] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[13]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[14] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11026. Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-05 19:28:40 UTC
From: Marcus NX5MK
Topic: 11012 Message: 11026

I've had a multiturn loop with 22 Ga wire, total length of wire 160m, diameter was about 20 feet (you please do the math on how many turns that is), about 12 feet up, in operation for about half a year with 10W. Worked on 40, 20m and other bands with SGC 211 tuner (can't remember the other bands, know that 30m did not tune), worked 80m with my transceiver's tuner.

Had plenty contacts.

vy 73 de Marcus NX5MK
Apparare Scientior Paratus Communicare

11027. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-05 20:26:42 UTC
From: T. Hills
Topic: 11012 Message: 11027

8 turns?

Watching this thread reminded me of what my EE Adviser told me when I was a Research Assistant for him.

Paraphrased, it was many Moons ago...

"Do the calculations and model all you want, when it comes down to it radio and antennas in particular operate on FM so you never what it's going to do until you build it"

He was not referring to Frequency Modulation BTW. ;)

Tim Hills
Sioux Falls, SD

>
>I've had a multiturn loop with 22 Ga wire, total length of wire 160m,
>diameter was about 20 feet (you please do the math on how many turns
>that is), about 12 feet up, in operation for about half a year with
>10W. Worked on 40, 20m and other bands with SGC 211 tuner (can't
>remember the other bands, know that 30m did not tune), worked 80m with
>my transceiver's tuner.
>
>
>Had plenty contacts.
>
>vy 73 de Marcus NX5MK
>Apparare Scientior Paratus Communicare
>
>

11028. Re: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-06 13:27:54 UTC
From: tenorman1952@...
Topic: 11012 Message: 11028

Hi, Max! Does it transmit, too? Or receive-only?

Paul - AE5JU

11029. Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-07 01:59:12 UTC
From: Marcus NX5MK
Topic: 11012 Message: 11029

8 turns sounds right. I remembered that it were around 6 or so, it were certainly many. It really was an experiment out of necessity at the time. I never dared to put more than 10W in on digital since the SGC211 does not take it. I did put 30W SSB through on 80m with fair results on a State net, not all ops were able to hear me with those parameters.

73 de Marcus NX5MK
Apparare Scientior Paratus Communicare

11030. Re: [loopantennas] Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-07 08:36:07 UTC
From: vk2tti@...
Topic: 11012 Message: 11030

G'day Paul, the big 2 turn loop I have only received on. The small two turn loop is used for 20m ham band on both Tx and Rx. The small loop with MFJ-936B tunes from 10 to 17 MHz but is not able to achieve a good match to 50 ohms at each end of that range. Regards Max vk2tti.
PS Ihave a SGC 237 tuner that would probably tune the big loop but I havn't tried it.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
06 Jun 2015 06:27:54 -0700
Subject:
Re: [loopantennas] Multi Turn Loops

Hi, Max! Does it transmit, too? Or receive-only?

Paul - AE5JU

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11028;_ylc=X3oDMTJyN2hsN3ZzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTAyOARzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0MzM1OTcyNzU-?act=reply&messageNum=11028
[2]
mailto:tenorman1952@...?subject=Re%3A%20%5Bloopantennas%5D%20Multi%20Turn%20Loops
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Multi%20Turn%20Loops
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmcnEyNjZvBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0MzM1OTcyNzU-
[5]
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[6] http://groups.yahoo.com/group/loopantennas/links

[7] http://groups.yahoo.com/group/loopantennas/files
[8] http://ph.groups.yahoo.com/group/loopantennas/photos
[9]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmaGZybnZmBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0MzM1OTcyNzU-
[10]
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[11]
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[12] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[13]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[14] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11031. RE: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-07 15:03:17 UTC
From: Brian Burns
Topic: 11012 Message: 11031

Hello Marcus,

Did you notice much directionality with that multi-turn loop on 80 or 160? Were you able to rotate it?

Cheers,

Brian Burns

8 turns sounds right. I remembered that it were around 6 or so, it were certainly many. It really was an experiment out of necessity at the time. I never dared to put more than 10W in on digital since the SGC211 does not take it. I did put 30W SSB through on 80m with fair results on a State net, not all ops were able to hear me with those parameters.

73 de Marcus NX5MK

Apparare Scientior Paratus Communicare

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11032. Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-08 21:16:09 UTC
From: Marcus NX5MK
Topic: 11012 Message: 11032

I had the 160m multiturn loop oriented horizontally, given that diameter was around 10m in a stealth setup…

Thus null straight up, no directionality in horizontal plane.

vy 73 de Marcus NX5MK
Apparare Scientior Paratus Communicare

11033. RE: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-08 23:50:36 UTC
From: Brian Burns
Topic: 11012 Message: 11033

Thanks Marcus,

~ I had the 160m multiturn loop oriented horizontally, given that diameter was around 10m in a stealth setup…Thus null straight up, no directionality in horizontal plane.

I've never worked either 160m or 80m, but would certainly like to have a rotatable loop for 40m, even if it had no gain, just directional lobes that could be aimed.

Cheers,

Brian

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11034. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-09 14:29:31 UTC
From: Brian
Topic: 11012 Message: 11034

Marcus / Brian,

For many years I used a 40m full wave loop in the
Horizontal mode at a height of 34ft and it worked fine out to 3,000
miles plus then I installed a reflector under the loop at 17ft so 17ft
spacing and it worked the world !!!!
243 DXCC countries worked / confirmed with 5 watts SSB from
a Kenwood TS-130V.
A great antenna, I must try a multi turn version.

72, Brian, GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 09, 2015 12:50 AM
To: loopantennas@yahoogroups.com
Subject: RE: [loopantennas] Re: Multi Turn Loops

11035. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-09 20:32:00 UTC
From: Everett Sharp
Topic: 11012 Message: 11035

Hi Brian,

I have a 80 meter loop and would be interested in how you had, or have your loop set up with the reflector and how you are feeding the loop. I am using a 4:1 current balun on mine and feeding with coax. I am able to use it on all bands 80 through 10, including the WARC bands, with the exception of 30, which requires a tuner.

73 Everett N8CNP

Sent from my iPad

> On Jun 9, 2015, at 9:29 AM, 'Brian' brian.nsl@... [loopantennas]
<loopantennas@yahoogroups.com> wrote:
>
> Marcus / Brian,
>
> For many years I used a 40m full wave loop in the
> Horizontal mode at a height of 34ft and it worked fine out to 3,000
> miles plus then I installed a reflector under the loop at 17ft so 17ft
> spacing and it worked the world !!!!
> 243 DXCC countries worked / confirmed with 5 watts SSB from
> a Kenwood TS-130V.
> A great antenna, I must try a multi turn version.
>
> 72, Brian, GØNSL.
>
>
> From: mailto:loopantennas@yahoogroups.com
> Sent: Tuesday, June 09, 2015 12:50 AM
> To: loopantennas@yahoogroups.com
> Subject: RE: [loopantennas] Re: Multi Turn Loops
>
>
>

11036. Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-10 15:13:29 UTC
From: Marcus NX5MK
Topic: 11012 Message: 11036

That’s amazing Brian!

Would love to know more about the reflector as well. Was it a closed loop of wire or an open loop of wire?

Not mentioned until now, was my experiment with a grass level loop antenna (maybe it’s of interest to some):
http://kd0jkm.blogspot.com/2012/06/k3mts-grasswire-antenna-idea.html
<http://kd0jkm.blogspot.com/2012/06/k3mts-grasswire-antenna-idea.html>

vy 73 de Marcus NX5MK
Apparare Scientior Paratus Communicare

11037. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-10 15:52:38 UTC
From: mike@...
Topic: 11012 Message: 11037

Brian; Your placement of a REFLECTOR under a horizontal loop is interesting!!

I have two loops, both same-sized for 75 meters:
One is at 40 feet height off the ground.
The other is at 20 feet height off the ground.

The 40 foot height one is TOTALLY IN THE CLEAR, supported by masts in an open field.
The 20 footer is clear of the trees, but is somewhat close to trees, and encircles a series of trees. (Maximum clearance is 15 feet, minimum clearance is 6 feet.)

The higher one has better signals (than the 20 foot height one) by about 2 S-units, RX and TX. This reference is on 75 meters, but 20m and 17m might also suffer.

Is there HOPE to add a REFLECTOR to the 20 foot high loop? I cannot get it higher; It is supported mainly by the trees... As for a possible reflector, I'd need to dig it into the grass under the loop's wire. (No hope, no "function," if it is buried..?)

Thank you! -Mike- K0JTA

11038. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-11 02:35:25 UTC
From: Dick Bingham
Topic: 11012 Message: 11038

Hi

I modeled this full-wave loop with and without the lower loop at 17-feet
using EZNEC
and it is a most *uninteresting* antenna and not one I'd waste any copper
on . . .

73 Dick/w7wkr and wd2xsh-26 at CN98pi

On Wed, Jun 10, 2015 at 8:52 AM, mike@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Brian; Your placement of a REFLECTOR under a horizontal loop is
> interesting!!
>
> I have two loops, both same-sized for 75 meters:
> One is at 40 feet height off the ground.
> The other is at 20 feet height off the ground.
>
> The 40 foot height one is TOTALLY IN THE CLEAR, supported by masts in an
> open field.
> The 20 footer is clear of the trees, but is somewhat close to trees, and
> encircles a series of trees. (Maximum clearance is 15 feet, minimum
> clearance is 6 feet.)
>
> The higher one has better signals (than the 20 foot height one) by about 2
> S-units, RX and TX. This reference is on 75 meters, but 20m and 17m might
> also suffer.
>
> Is there HOPE to add a REFLECTOR to the 20 foot high loop? I cannot get
> it higher; It is supported mainly by the trees... As for a possible
> reflector, I'd need to dig it into the grass under the loop's wire. (No
> hope, no "function," if it is buried..?)
>
> Thank you! -Mike- K0JTA
>
>

11039. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-11 03:36:36 UTC
From: Paul V Birke PEng
Topic: 11012 Message: 11039

a number of us waiting for this answer
p

11040. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-11 05:43:20 UTC
From: Brian
Topic: 11012 Message: 11040

Dick,
There are occasions when antenna theory falls on its face.
The antenna worked here !!!!
72, Brian, GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Thursday, June 11, 2015 3:35 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Multi Turn Loops

11041. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-11 06:01:43 UTC
From: kevin asato
Topic: 11012 Message: 11041

That's what i like about radio. There's theory and modelling and there's the real world.

Radio - it's all FM!
73,
kevin
kc6pob

Dick,
       There are occasions when antenna
theory falls on its face.
The antenna worked here !!!!

72, Brian, GØNSL.

11042. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-11 15:02:27 UTC
From: Dick Bingham
Topic: 11012 Message: 11042
Attachments: 5 described; binary payloads are missing from this source WARC

Hello Brian

Regarding your ===>
Dick,
* There are occasions when antenna theory falls on its face.*
The antenna worked here !!!!
* 72, Brian, GØNSL.*

Yes, you are somewhat correct, but I've modeled many antennas, built them and they performed as modeled . My expectation of an antenna is for it to have a fairly low TOA with a minimum of energy directed nearly straight up.

Your H-loop with the lower loop/reflector directs most of the energy upward at TOA's above 60-degrees which is fine for local area "Nets". Yes, it does radiate at low angles but at markedly lower levels compared to the higher TOA's : gain is ~4.6dBi at 90-degrees and 5dB lower at 23-degrees.

[image: Inline image 1]
Your H-Loop expected VSWR behavior:

[image: Inline image 3]
Now, here is a simple 34-foot tall vertical with only four 34-foot long radials - much less copper and about the same gain at 23-deg TOA as your loop. This antenna has about 0.4dB LESS gain than your loop at 23-degrees TOA but is easier to install using only one 34-foot tall support versus one for each corner.

[image: Inline image 5]
If 8-radials are used the gain at 23-degrees TOA increases to -0.31dBi which is more than the horizontal loop using about the same amount of copper.

[image: Inline image 6]
I adjusted the wire lengths a tiny bit to position the resonant point around 7.15MHz . Here is the expected VSWR for the 8-radial vertical

[image: Inline image 7]
All of the radials are modeled to be 0.1-foot above ground because EZNEC V5.0 does not deal well with radials touching or embedded in the ground.

The slightly re-scaled wire lengths to position resonance around 7.15MHz results in a slight gain improvement: gain ~ -0.24dBi at TOA = 23-degrees.

Being more DX oriented, I would build the simple vertical antenna to take advantage of the low TOA and reduced level of the more local station signals due to the null at 90-degrees TOA.

For the more casual operator your loop is probably the better one to use since it approaches an NVIS in its behavior.

73 Dick/w7wkr CN98pi

On Wed, Jun 10, 2015 at 10:43 PM, 'Brian' brian.nsl@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> *Dick,*
> * There are occasions when antenna theory falls on its face.*
> *The antenna worked here !!!!*
> * 72, Brian, GØNSL.*
>
> *From:* mailto:loopantennas@yahoogroups.com
> <loopantennas@yahoogroups.com>
> *Sent:* Thursday, June 11, 2015 3:35 AM
> *To:* loopantennas@yahoogroups.com
> *Subject:* Re: [loopantennas] Re: Multi Turn Loops
>
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11043. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-11 16:16:08 UTC
From: Don Sanders
Topic: 11012 Message: 11043
Attachments: 5 described; binary payloads are missing from this source WARC

Dick, your info is very interesting.
Yes for DX the vertical is a better antenna.
However local noise may be a problem in an urban location on receive.
Here in Ecuador I have no local contacts on 40 or 30 meters.The nearest active ham is 40 miles away.
Most hams, less than 200 country wide,operate 20 to 10 meters, except for local country wide net on 7060 at 7 PM local time nightly.
Therefore most of my contacts are over 3000 miles from my QTH.

I currently have a 66 foot doublet at 75 feet above average terrain fed with 300 ohm line and tuner.
A 40 meter loop at 45 feet fed with coax and a 88 foot inv "L" center fed with 300 ohm line.
The "L" has the feed point at 40 feet AGL and half vertical and half sloping horizontal.

When the conditions were good, the last 4 years, the horizontal doublet was the best antenna 40 to 10 and the inv "L" second. The loop was quieter on receive and used primarily as Rx antenna.
Now with reduced condx the "L" is always the antenna of choice for contacts 40 to 17. Higher sig levels by 2 to 4 "S" units. I use the "L" because I don't have adequate room for a good radial system with a vertical. The "L"is often lower noise than the horizontal doublet.

I plan a 44 foot inv "L" soon as a backup to the 88 footer. BTW, I worked Europe and Japan and ASIA on 80 meters with the "L" and 100 watts. I also plan to convert the 40 loop to a 2 turn RX antenna.

For someone operating casually in the states, the loop is probably the best all round antenna. But for DX,and all my contacts are DX, the vertical or inv "L" is hands down the better antenna.

Dr. Don HC4/W4BWS

On Thu, Jun 11, 2015 at 10:02 AM, Dick Bingham dick.bingham@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Hello Brian
>
> Regarding your ===>
> *Dick,*
> * There are occasions when antenna theory falls on its face.*
> *The antenna worked here !!!!*
> * 72, Brian, GØNSL.*

>
>
> Yes, you are somewhat correct, but I've modeled many antennas, built them
> and they performed as modeled . My expectation of an antenna is for it to
> have a fairly low TOA with a minimum of energy directed nearly straight
> up.
>
> Your H-loop with the lower loop/reflector directs most of the energy upward
> at TOA's above 60-degrees which is fine for local area "Nets". Yes, it does
> radiate at low angles but at markedly lower levels compared to the higher
> TOA's : gain is ~4.6dBi at 90-degrees and 5dB lower at 23-degrees.
>
>
>
> [image: Inline image 1]
> Your H-Loop expected VSWR behavior:
>
> [image: Inline image 3]
> Now, here is a simple 34-foot tall vertical with only four 34-foot
> long radials - much less copper and about the same gain at
> 23-deg TOA as your loop. This antenna has about 0.4dB LESS
> gain than your loop at 23-degrees TOA but is easier to install
> using only one 34-foot tall support versus one for each corner.
>
> [image: Inline image 5]
> If 8-radials are used the gain at 23-degrees TOA increases
> to -0.31dBi which is more than the horizontal loop using about
> the same amount of copper.
>
> [image: Inline image 6]
> I adjusted the wire lengths a tiny bit to position the resonant
> point around 7.15MHz . Here is the expected VSWR for the
> 8-radial vertical
>
> [image: Inline image 7]
> All of the radials are modeled to be 0.1-foot above ground
> because EZNEC V5.0 does not deal well with radials touching
> or embedded in the ground.
>
> The slightly re-scaled wire lengths to position resonance around
> 7.15MHz results in a slight gain improvement: gain ~ -0.24dBi
> at TOA = 23-degrees.
>
> Being more DX oriented, I would build the simple vertical antenna
> to take advantage of the low TOA and reduced level of the more
> local station signals due to the null at 90-degrees TOA.
>
> For the more casual operator your loop is probably the better one
> to use since it approaches an NVIS in its behavior.
>

> 73 Dick/w7wkr CN98pi
>
> On Wed, Jun 10, 2015 at 10:43 PM, 'Brian' brian.nsl@...
> [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
>>
>>
>> *Dick,*
>> * There are occasions when antenna theory falls on its face.*
>> *The antenna worked here !!!!*
>> * 72, Brian, GØNSL.*
>>
>> *From:* mailto:loopantennas@yahoogroups.com
>> <loopantennas@yahoogroups.com>
>> *Sent:* Thursday, June 11, 2015 3:35 AM
>> *To:* loopantennas@yahoogroups.com
>> *Subject:* Re: [loopantennas] Re: Multi Turn Loops
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>

11044. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-11 18:13:03 UTC
From: Brian
Topic: 11012 Message: 11044

Dick,
Thank you for the very extensive ‘ expose’ of the horizontal
loop antenna and for one who has never modelled an antenna in 40
years of ham radio quite an eye opener !!!!

I can recall a long 40 minute contact with a 9X5 station on 15m who was an engineer for
Deutsche Welle
and him asking about ‘ angles of attack ‘ from my loop, I was lost hi!

Regards,
72, Brian, GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Thursday, June 11, 2015 4:02 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Multi Turn Loops

11045. Re: [loopantennas] Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-14 00:08:27 UTC
From: Dick Bingham
Topic: 11012 Message: 11045

Hi Brian

If you are interested, EZNEC has a free evaluation form of the software you can use to evaluate, say, a dipole or something simple.

Check out at ===> http://www.eznec.com/demoinfo.htm

If you do, I think you will be surprised and delighted by what this SW allows you to explore . . .

73 Dick/w7wkr CN98pi

On Thu, Jun 11, 2015 at 11:13 AM, 'Brian' brian.nsl@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> *Dick,*
> * Thank you for the very extensive ‘ expose’ of the horizontal*
> *loop antenna and for one who has never modelled an antenna in 40*
> *years of ham radio quite an eye opener !!!!*
>
> *I can recall a long 40 minute contact with a 9X5 station on 15m who was
> an engineer for Deutsche Welle*
> *and him asking about ‘ angles of attack ‘ from my loop, I was lost hi!*
>
> * Regards,*
> * 72, Brian,
> GØNSL.*
>
> *From:* mailto:loopantennas@yahoogroups.com
> <loopantennas@yahoogroups.com>
> *Sent:* Thursday, June 11, 2015 4:02 PM
> *To:* loopantennas@yahoogroups.com
> *Subject:* Re: [loopantennas] Re: Multi Turn Loops
>
>
>
>
>
>
>
>
>

11046. mag loop support structure

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-15 10:23:37 UTC
From: gail21@...
Topic: 11046 Message: 11046

mag loop https://www.flickr.com/photos/133880815%40N03/sets/72157654233714081

mag loop https://www.flickr.com/photos/133880815%40N03/sets/72157654233714081/show
radiohamuk's mag loop set

View on www.flickr.com
https://www.flickr.com/photos/133880815%40N03/sets/72157654233714081/show
Preview by Yahoo

best method to support loop structure? minimal design ideas please?

2.2mtr loop
73s
g4xcp

11047. Re: mag loop support structure

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-15 12:35:40 UTC
From: dj_philonline@...
Topic: 11046 Message: 11047

PVC overflow pipe works well, you can feed via a toroid ring in a slot cut into the top or go for the ultimate design like this (not that simple but nice) watch the build series well worth it.
The Lightweight Magnetic Loop - Part 1 of 6 - M0VST
https://www.youtube.com/watch?v=hso0Xc-72EA

https://www.youtube.com/watch?v=hso0Xc-72EA

The Lightweight Magnetic Loop - Part 1 of 6 - M0VST
https://www.youtube.com/watch?v=hso0Xc-72EA Hi all I've defiantly caught the loop bug, I was so impressed with the ugly loop I decided to make this one. This time I aimed for a lightweight but still ve...

View on www.youtube.com https://www.youtube.com/watch?v=hso0Xc-72EA
Preview by Yahoo

11048. Bending pvc pipe

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 15:37:30 UTC
From: Brian Burns
Topic: 11048 Message: 11048

Hello All,

I checked on google just now for info on bending PVC pipe. There is a whole slew of how-to instructional materials available there. Has anyone done it to support a circular wire loop? It looks like it would be a lot easier and cheaper than gluing up an octagon, or whatever.

Cheers,

Brian Burns

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11049. Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 16:13:24 UTC
From: Brian Burns
Topic: 11049 Message: 11049

Hello again All,

Am I right in assuming that to get the highest Q (and narrowest bandwidth) possible in a magnetic loop, I should use small gauge wire inside a PVC pipe support structure?

I realize that this is the opposite of what most people are looking for.

Cheers,

Brian Burns

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11050. Re: [loopantennas] Bending pvc pipe

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 16:31:39 UTC
From: Myamiphil
Topic: 11048 Message: 11050

How big do you w2ant it... I just snagged a hoola hoop from the trash the other day.... they're about 4ft in dia.Im saving it for a SW loop antenna project
 Best Regards Phil
KD2HTN / WA2069SWL
Lat: 40.8367633 Long: -74.1768412

From: "'Brian Burns' brian@lessonsinlutherie.com [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Tuesday, June 16, 2015 11:37 AM
Subject: [loopantennas] Bending pvc pipe

  Hello All, I checked on google just now for info on bending PVC pipe. There is a whole slew of how-to instructional materials available there. Has anyone done it to support a circular wire loop? It looks like it would be a lot easier and cheaper than gluing up an octagon, or whatever. Cheers, Brian Burns

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11051. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 16:32:57 UTC
From: Richard (Rick) Karlquist
Topic: 11049 Message: 11051

To get the highest Q, you should use the largest round
conductor to build the loop. For loops of circumference
above something like 1/10 wavelength, the Q tends to be
limited by radiation resistance, and it is not necessary
to use a huge conductor.

You should also not put the wire inside of a PVC pipe.
That will lower the Q. If you want to use PVC pipe, then
cover it with copper tape wound axially (not helically),
and use the copper as the conductor.

Rick N6RK

On 6/16/2015 9:13 AM, 'Brian Burns' brian@...
[loopantennas] wrote:
> Hello again All,
>
> Am I right in assuming that to get the highest Q (and narrowest
> bandwidth) possible in a magnetic loop, I should use small gauge wire
> inside a PVC pipe support structure?
>
> I realize that this is the opposite of what most people are looking for.
>
> Cheers,
>
> Brian Burns
>
>
>
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> This email has been checked for viruses by Avast antivirus software.
> www.avast.com <https://www.avast.com/antivirus>
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11052. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 17:49:03 UTC
From: Bob C
Topic: 11049 Message: 11052

On 6/16/2015 12:13 PM, 'Brian Burns' brian@...
[loopantennas] wrote:
> I realize that this is the opposite of what most people are looking for.

I too use narrow-band (high-Q) loops between 0.15 MHz and ~23 MHz to the exclusion of almost everything else. I would think anyone wanting a broad-band antenna would be building a loop for all the wrong reasons.

Bob C.

11053. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 18:17:08 UTC
From: Brian Burns
Topic: 11049 Message: 11053

Hello Bob,

I too use narrow-band (high-Q) loops between 0.15 MHz and ~23 MHz to the exclusion of almost everything else. I would think anyone wanting a broad-band antenna would be building a loop for all the wrong reasons.

Bob C.

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11054. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 18:50:26 UTC
From: Brian Burns
Topic: 11049 Message: 11054

Hello again Rick,

~ If you want to use PVC pipe, then cover it with copper tape wound axially (not helically), and use the copper as the conductor.

~ Rick N6RK

So, if I understand you correctly, you would use wide copper tape in one large turn around the outside perimeter of the circular PVC form? Would the copper tape have to meet electrically, edge to edge on the inside of the loop?

The widest adhesive backed copper tape that I could locate was 3 inches wide. Even on Amazon it was expensive, because it was being sold in minimum 36 yard lengths.

Cheers,

Brian

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11055. RE: [loopantennas] Bending pvc pipe

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 18:55:30 UTC
From: Brian Burns
Topic: 11048 Message: 11055

Hello Phil,

~ How big do you w2ant it... I just snagged a hoola hoop from the trash the other day.... they're about 4ft in dia.

Im saving it for a SW loop antenna project

I just like to be able to choose the size myself, both of the overall diameter and the diameter of the tubing. And then there is the convenience of all those fittings---tees and ells etc.

Cheers,

Brian

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11056. Re: [loopantennas] Bending pvc pipe

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 19:23:11 UTC
From: Curt Nixon
Topic: 11048 Message: 11056

You can bend PVC pipe when it is heated up. Bends easily---but the problems of fixturing it, heating it all up, keeping it warm, handling it, and keeping it from collapsing will make you crazy.

Up to about an inch or 1-1/4 in diameter, there are some other, thin-walled water tubing that will bend in a diameter of 24 inches or so without collapsing.

This seems like a lot of effort.

Copper tubing can be purchased that is dead soft for bending. Up to at least 3/4 or 1 inch in diameter. It can be easily formed.

Alternative is get the size coper tube you need, fill it with sand, put on end caps and have it roll formed into a loop. metal fab shops do this all the time. Motor cycle frame shops or racing roll cage guys typically can do this up to 4 or 5 inch dia tube.

KU8L

On 6/16/2015 2:55 PM, 'Brian Burns' brian@...
[loopantennas] wrote:
>
> Hello Phil,
>
> ~ How big do you w2ant it... I just snagged a hoola hoop from the
> trash the other day.... they're about 4ft in dia.
>
> Im saving it for a SW loop antenna project
>
> I just like to be able to choose the size myself, both of the overall
> diameter and the diameter of the tubing. And then there is the
> convenience of all those fittings---tees and ells etc.
>
> Cheers,
>
> Brian
>
>
>
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>
>

11057. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 19:48:09 UTC
From: Richard (Rick) Karlquist
Topic: 11049 Message: 11057

On 6/16/2015 11:50 AM, 'Brian Burns' brian@...
[loopantennas] wrote:
> Hello again Rick,
>
> ~ If you want to use PVC pipe, then cover it with copper tape wound axially
> (not helically), and use the copper as the conductor.
>
> ~ Rick N6RK
>
> So, if I understand you correctly, you would use wide copper tape in one
> large turn around the outside perimeter of the circular PVC form? Would the
> copper tape have to meet electrically, edge to edge on the inside of the
> loop?

Several pieces of tape, where each is one large turn around PVC, and
overlap them so that the PVC is fully covered in copper.

>
> The widest adhesive backed copper tape that I could locate was 3 inches
> wide. Even on Amazon it was expensive, because it was being sold in minimum
> 36 yard lengths.

You want highest Q, use copper. Home Depot sells aluminum tape that
might be cheaper. It will theoretically decrease Q by 28% vs copper

Rick N6RK

11058. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 20:10:57 UTC
From: Andy
Topic: 11049 Message: 11058

Brian Burns wrote:

"Am I right in assuming that to get the highest Q (and narrowest bandwidth) possible in a magnetic loop, I should use small gauge wire inside a PVC pipe support structure?"

By "small gauge wire", did you mean a small number (like 10-gauge or less, even 0- or 0000-gauge)? Or did you mean a small (thin) wire?

I think the Q is dominated by the resistance of the loop's conductors (over any geometric effects). Therefore, minimizing resistance loss is essential for getting good efficiency and highest Q. Increasing the surface area reduces the resistance.

There's all sorts of magnetic loops out there; but for the folks who are really serious about using them for transmitting, most tend to use copper pipe, the fatter the better (except for the effect on their wallets).

Andy

11059. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 20:50:07 UTC
From: Brian Burns
Topic: 11049 Message: 11059

Hello Bob,

I too use narrow-band (high-Q) loops between 0.15 MHz and ~23 MHz to the exclusion of almost everything else. I would think anyone wanting a broad-band antenna would be building a loop for all the wrong reasons.

Bob C.

I think I accidentally hit the send button, and sent you a blank reply!

I plan on using the loop with a regenerative receiver, and am looking to get selectivity by "whatever means necessary". Short of going to a superhet (;->).

By the way, is there a rule of thumb for voltage developed across the tuning cap by a power level in watts? I'm thinking of using my loop with a QRP transmitter putting out 5 watts.

Cheers,

Brian

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11060. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 20:58:26 UTC
From: Brian Burns
Topic: 11049 Message: 11060

Hello Rick,

~ You want highest Q, use copper. Home Depot sells aluminum tape that might be cheaper. It will theoretically decrease Q by 28% vs copper

~ Rick N6RK

I'm beginning to think that copper tubing looks like the best and easiest solution after all. Is there an optimum tubing diameter for the HF bands, or is it just a matter of the larger the diameter the higher the Q?

I'm sure all this has been gone over before---thanks for saving me the trouble of digging through the archives (:->)...

73,

Brian

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11061. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 21:27:25 UTC
From: gnuarm.2007@...
Topic: 11049 Message: 11061

I am far from an expert on tuned loop antenna, but when I looked into the design principles some time back, I was constantly reminded that too high of a Q will limit the bandwidth to the point that it restricts the bandwidth of the received signal. Since the relationship between Q, operating frequency and bandwidth is a relative thing, maybe your frequency is high enough you won't have that as an issue. But if you are talking about using copper tubing for the antenna, you might want to check your calculations to see if this might be a concern.

My application was for the WWVB signal at 60 kHz. So while it would be easy to narrow the bandwidth quite a bit at that low frequency, the signal only needs some 20 Hz, so it was not a problem with the wire I was planning to use.

Rick

11062. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 21:45:25 UTC
From: Brian Burns
Topic: 11049 Message: 11062

Hello Rick,

~ I am far from an expert on tuned loop antenna, but when I looked into the design principles some time back, I was constantly reminded that too high of a Q will limit the bandwidth to the point that it restricts the bandwidth of the received signal. Since the relationship between Q, operating frequency and bandwidth is a relative thing, maybe your frequency is high enough you won't have that as an issue. But if you are talking about using copper tubing for the antenna, you might want to check your calculations to see if this might be a concern.

Thanks for the reply!

My plan is to use the loop for QRP ham receiving with a regenerative receiver and a 5 watt transmitter on 80 meters and above. I'll be using CW, and trying QRP AM as an experiment.

Minimum bandwidth on AM is about 3 KHz, and on CW it's probably 500 Hz, depending on the stability of the receiver. So at those frequencies the antenna Q would have to be astronomical to cause any problems.

Cheers,

Brian

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11063. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 21:49:05 UTC
From: Brian Burns
Topic: 11049 Message: 11063

Hello Andy

There's all sorts of magnetic loops out there; but for the folks who are really serious about using them for transmitting, most tend to use copper pipe, the fatter the better (except for the effect on their wallets).

Andy

Thanks for the info!

I haven’t priced copper tubing lately, but from what I hear, I’ll need to take out a second mortgage.

Cheers,

Brian

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11064. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 22:03:47 UTC
From: Richard (Rick) Karlquist
Topic: 11049 Message: 11064

On 6/16/2015 1:58 PM, 'Brian Burns' brian@...
[loopantennas] wrote:

> I'm beginning to think that copper tubing looks like the best and easiest
> solution after all. Is there an optimum tubing diameter for the HF bands, or
> is it just a matter of the larger the diameter the higher the Q?

This is true for circumferences less than about 0.1 wavelengths.
Above that, you can get into a situation where the Q and efficiency
reach the point of diminishing returns and you might as well just
use 12 gauge wire or something.

A really big loop made out of wire will blow away a smaller one
using huge copper tubing. Loop area trumps everything else.

Rick N6RK

11065. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 22:58:19 UTC
From: gnuarm.2007@...
Topic: 11049 Message: 11065

Lol, define "astronomical". If you are talking about using copper pipe, then you may well achieve some very high Q factors. 80 Meters is not all that high a frequency.

I'm just sayin'...

Anyone worked this out before?

11066. RE: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 23:44:37 UTC
From: Brian Burns
Topic: 11049 Message: 11066

~ Lol, define "astronomical".

The definition of Q that I use is the bandwidth at the 3db down points, divided into the center frequency. So if we figure the bottom end of 80 meters as 3,500,000 Hz, and 3,000 Hz as the narrowest permissible bandwidth for AM, then the antenna Q would have to be greater than 1167 to cause a problem.

Hmmm, that’s a good deal lower than I thought. What sorts of Q’s do well-made copper loops achieve? This is getting interesting---especially for use with a regenerative receiver.

Cheers,

Brian__

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11067. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-17 00:34:29 UTC
From: BobC
Topic: 11049 Message: 11067

I'm frequently confused whether these threads are about receiving or transmitting loops. If transmitting, just let me know, and I will go back to copying the mail.

My goal has always been to maximize coil inductance (effective height). In a resonant circuit, that involves minimizing distributed capacitance. This invariably results in a multi-turn spiral (pancake) coil wound with hookup wire. Q seems to take care of itself. At 400 kHz, for example, I would estimate the bandwidth to be less than 1 kHz, while around 20 MHz it's on the order of 100 to 200 kHz. These are different loops, of course. You can do the math to see what kinds of Qs these are. Body capacitance will significantly detune my LW loop. However, I don't detect too much attenuation of sidebands from European and N. African LW AM stations. In spite of a -3 db bandwidth, the skirts of the bandpass still flare out.

Bob C.

On 6/16/2015 7:44 PM, 'Brian Burns' brian@...
[loopantennas] wrote:
>
> ~ Lol, define "astronomical".
>
> The definition of Q that I use is the bandwidth at the 3db down
> points, divided into the center frequency. So if we figure the bottom
> end of 80 meters as 3,500,000 Hz, and 3,000 Hz as the narrowest
> permissible bandwidth for AM, then the antenna Q would have to be
> greater than 1167 to cause a problem.
>
> Hmmm, that’s a good deal lower than I thought. What sorts of Q’s do
> well-made copper loops achieve? This is getting
> interesting---especially for use with a regenerative receiver.
>
> Cheers,
>
> Brian__
>
>
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11068. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-17 01:00:29 UTC
From: Andy
Topic: 11049 Message: 11068

"What sorts of Q’s do well-made copper loops achieve?"

There are a few loop calculators on the net. The two more well-known ones I know of are:

http://www.66pacific.com/calculators/small_tx_loop_calc.aspx
http://www.aa5tb.com/loop.html (http://www.aa5tb.com/aa5tb_loop_v1.22a.xls)

For 80 meters and a 20 foot circumference (6.4 foot diameter) loop made out of 1 inch copper pipe, the first one says the Q is 1407 and the bandwidth is 2.49 kHz. The second calculator is in close agreement, with a Q of 1389 and a bandwidth of 2.519 kHz.

The efficiency of such a loop is 11-12 %, so nearly 90% of your power goes into heating up the copper pipe. And this doesn't account for other losses, such as the tuning capacitor. But those other losses help improve one's bandwidth by lowering the Q.

Measuring Q of an actual antenna is something else entirely. Many people seem to want to approximate the Q by looking at the points where their antenna's SWR is 2:1. But 2:1 is entirely arbitrary and it has no meaning for Q. If the antenna were being fed by a matched impedance source, the SWR would be 5.828:1 at the half-power (-3dB) points. But transmitters do not look like a matched impedance source. One person on the net argues that it looks more like an ideal voltage source (an idea I do not agree with), and therefore the response at SWR=5.828 would be -6dB instead of -3dB.

Just about nobody has the means to measure when the actual field strength is -3dB from the center frequency; and even if they did, it's uncertain what the transmitter would produce for power output as the antenna's SWR varies.

I guess what one really ought to do is use a fixed test signal that contains a (noise-like?) range of frequencies, and then use something like a spectrum analyzer to analyze the radiated emissions and derive how those signals are affected by the antenna's bandwidth.

Andy

11069. Re: [loopantennas] Bending pvc pipe

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-17 04:53:18 UTC
From: Andy Gardner
Topic: 11048 Message: 11069

Use HDPE water pipe instead of PVC. Better at RF.

On 17/06/2015, at 3:37 AM, 'Brian Burns' brian@... [loopantennas] wrote:

>
> Hello All,
>
>
>
> I checked on google just now for info on bending PVC pipe. There is a whole slew of how-to instructional materials available there. Has anyone done it to support a circular wire loop? It looks like it would be a lot easier and cheaper than gluing up an octagon, or whatever.
>
>
>
> Cheers,
>
>
>
> Brian Burns

11070. Re: Bending pvc pipe

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-16 23:32:06 UTC
From: Art Womer
Topic: 11048 Message: 11070

Hello Brian,

You can also use PEX, sold at Home Depot & I suppose Lowes (I work at HD). Its a a little over $5 for a 10 ft piece and very bendable. Comes in 1/2 to 1in dia. and in 3 colors, Red, White & Blue (I know patriotic, but its Hot, feed and Cold) Easy to use.

73
KI4OYV

artwoa@...

11071. Re: [loopantennas] Bending pvc pipe

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-17 11:02:23 UTC
From: david.sarraf@...
Topic: 11048 Message: 11071

Heat works ok, but electricians also use bending springs for 1/2" and 3/4" PVC. They work well. Both electric supply shops near me have springs and short lengths of pipe near the counter for people to play with while they're waiting. Possibly yours does too so you can see for yourself how well they'll work. PVC in a spring doesn't go like copper or brass, where you slowly exert force and the metal moves. You need to push really hard until the PVC starts to move; after you reach that point it bends with a lot less force.

Dave Sarraf
N3NDJ

11072. Re: Spiral LW loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-17 12:48:14 UTC
From: Bob C
Topic: 11072 Message: 11072

Steve,

I've changed the topic, so as not to bother the hi-Q folks.

Holes are drilled along the cross members at 1/4" intervals.
As the outside turns are approximately 3', that would make the cross members approximately 4'3".
With 80 turns, they will be wound nearly to the pick-up coil in the center.
I calculated the total length of wire required a few months ago and seem to recall it being in excess of 400 ft. That should produce some measurable resistance, but the resulting Q is truly amazing. I used several short pieces of 22 AWG and soldered them together as lacing progressed.
Best to anchor the cross members on a big piece of plywood while you lace the turns. That way you can more easily pull out slack and keep the frame relatively square. My loop is about 30 years old, and the primary coil is still relatively taut.
My pickup coil is shielded based on old theory I read at the time about low-impedance, direction-finding loops. I'm not convinced any longer that shielding a pickup coil is necessary for nulls. Based on my recent experience with SW pick-up coils, I should go back and revisit the LW pickup coil design.

I have not spent a lot of time DXing NDBs. My main interest at the time of construction was picking up trans-Atlantic BC stations here in Maryland. Depending on propagation, there are four or five regulars.

As you know, noise can be a killer on LW. This antenna will dramatically reduce or completely null it, especially if you include variation of vertical orientation in the mounting arrangement.

Regards,

Bob C.

On 6/16/2015 10:00 PM, Steve Ratzlaff wrote:
> Hi Bob,
> What is the spacing between turns for the LW loop?
> Thanks,
> Steve
>
> On 6/16/2015 5:52 PM, BobC wrote:
>>
>> Steve,
>>
>>
>> I have two articles in the files section:

>> ElectricallySmallResonantLoopForMediumWave.pdf
>> <https://xa.yimg.com/df/loopantennas/ElectricallySmallResonantLoopForMediumWave.pdf?tok
en=B1IOym4kk-sDclhBlY7XFKVC9x8W3IyoJubhW6ufxG3xoyjPVlYxoY8GfepruOanT8F7VzjCgsIQnsi4VSn7vev
Cf0e7tL-iB2e9D4lBkNlg5E3NZM4uBV0b-TDlCnpsgAJMZDuDWZUWDyqqfg&type=download>
>> and Electrically Small Resonant Loop for Shortwave (Oct '14).pdf
>> <https://xa.yimg.com/df/loopantennas/Electrically+Small+Resonant+Loop+for+Shortwave+%28
Oct+%2714%29.pdf?token=YH9Z5LmwKyTLd5wOPWrn6aHTzPLck5Y1RcAW_EsAEey3ldoWgWdam-SFpFOJcvh-QHQ
TNW6ZRYMY3S88z8DE_K80ikKoswIh7KQ7kKp8p4cOUH6eqcDZCybQn9wRBuqXThH7u0SeI_AqU7viqf5MFJGEXQf-A
CT9VUqart0-aARQ4HFqLvmduPTukN8KWLE&type=download>.
>> My LW loop is not directly described, but is similar to the one
>> described for MW. The LW loop has 80 turns wound on a wooden cross
>> frame; outside turns are 3' each side. Both the LW and MW loops
>> mount on tripods (also described) and rotate 360 degrees laterally
>> and 90 degrees vertically.
>>
>>
>> Good luck. Let me know if you decide to tackle these, and if you
>> have any questions.
>>
>>
>> Bob C.
>>
>>
>

11073. Re: [loopantennas] Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-17 10:02:31 UTC
From: Mike Penkas
Topic: 11049 Message: 11073
Attachments: 1 described; binary payloads are missing from this source WARC

I recently finished constructing a helically wound 19 foot diameter loop for 80 thru 30. It is constructed with 3.5in OD flexible corrugated irrigation pipe and a PVC frame. I helically wound it with 44 feet of 3in wide .008 copper sheet. All my mechanical copper connections are silver plated and the gamma match is silver soldered. My bandwidth for 1.0 to 2.0 SWR is 4 Khz on the low end of 80 and almost 20 Khz on 40 and 30. I know there is a lot of controversy regarding helically wound loops vs solid copper but mine works great. If nothing else I am able to use a lower capacitance VVC for the loop diameter than I would for say a loop of say 7/8 heliax. A picture of the loop is on my QRZ page. I am attaching a pic of the SWR curve from my analyzer, don't know if it will come through on this reply.
Mike WA8EBM

On 6/16/2015 9:00 PM, Andy ai.egrps@... [loopantennas] wrote:
> "What sorts of Q’s do well-made copper loops achieve?"
>
> There are a few loop calculators on the net. The two more well-known
> ones I know of are:
>
> http://www.66pacific.com/calculators/small_tx_loop_calc.aspx
> http://www.aa5tb.com/loop.html
> (http://www.aa5tb.com/aa5tb_loop_v1.22a.xls)
>
> For 80 meters and a 20 foot circumference (6.4 foot diameter) loop
> made out of 1 inch copper pipe, the first one says the Q is 1407 and
> the bandwidth is 2.49 kHz. The second calculator is in close
> agreement, with a Q of 1389 and a bandwidth of 2.519 kHz.
>
> The efficiency of such a loop is 11-12 %, so nearly 90% of your power
> goes into heating up the copper pipe. And this doesn't account for
> other losses, such as the tuning capacitor. But those other losses
> help improve one's bandwidth by lowering the Q.
>
> Measuring Q of an actual antenna is something else entirely. Many
> people seem to want to approximate the Q by looking at the points
> where their antenna's SWR is 2:1. But 2:1 is entirely arbitrary and
> it has no meaning for Q. If the antenna were being fed by a matched
> impedance source, the SWR would be 5.828:1 at the half-power (-3dB)
> points. But transmitters do not look like a matched impedance
> source. One person on the net argues that it looks more like an ideal
> voltage source (an idea I do not agree with), and therefore the
> response at SWR=5.828 would be -6dB instead of -3dB.
>

> Just about nobody has the means to measure when the actual field
> strength is -3dB from the center frequency; and even if they did, it's
> uncertain what the transmitter would produce for power output as the
> antenna's SWR varies.
>
> I guess what one really ought to do is use a fixed test signal that
> contains a (noise-like?) range of frequencies, and then use something
> like a spectrum analyzer to analyze the radiated emissions and derive
> how those signals are affected by the antenna's bandwidth.
>
> Andy
>
>
>

11074. Loop and possible REFLECTOR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-18 00:29:56 UTC
From: Mike Schwendeman
Topic: 11074 Message: 11074

Hello, and thanks for the email!! (See below.....)

On 6/11/15 12:57 AM, Brian wrote:
> /Mike,/
> / There are variants of the horizontal loop antenna idea where
> the /
> /reflector loop is simply laid on the ground and even one where it is
> not a loop /
> /but simply three spaced single wires./

Interesting!! I had never heard of this!! I had heard of laying the reflector on the ground as ONE PIECE OF WIRE that is in the form of a loop, but three pieces of wire..???? (Is the reference for a three-side loop?

> //
> /I would certainly try a reflector under your 40ft high antenna./

//I am OK with the 40 foot loop. The loop that is 20 feet off the ground works OK, but it is one S-unit lower than the co-located 35 to 40 foot height loop.

It is for this reason that I wanted to see if anyone had info on (first of all), if such a low height loop (at 20 feet)m can be improved! -By adding a reflector, as an example.

> //
> /There is a G station that is a farmer and uses a single horizontal
> loop antenna, /
> /3 full waves on 160m around his moorland site, the signal is awesome/
> /though only 20ft high !!!!!/

//My loops are for 75m. I have had many LARGER loops, the largest being well over 2000 feet. They were OK, but not good on 75m. I finally learned to model antennas and READ what the modeling was telling me. It became apparent that a 75m loop was the king, which I finally proved to myself. (I am a slow learner, and had always stuck to the bigger, higher as the terms to adhere to with antennas.

73; -Mike- K0JTA
> //
> /Regards,/
> /72, Brian, GØNSL./
> *From:* mailto:loopantennas@yahoogroups.com
> *Sent:* Wednesday, June 10, 2015 4:52 PM
> *To:* loopantennas@yahoogroups.com <mailto:loopantennas@yahoogroups.com>
> *Subject:* Re: [loopantennas] Re: Multi Turn Loops

>
> Brian; Your placement of a REFLECTOR under a horizontal loop is
> interesting!!
>

11075. Re: Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-18 12:28:38 UTC
From: k4hkx@...
Topic: 11049 Message: 11075

Hi Andy,

I'm sure you meant 19ft circumference! Anyway, you are right, the main advantage of a helically wound loop is increased inductance, which enables a smaller capacitor to be used for a given frequency, or a smaller loop for the same size cap. The tradeoff is a little loss in efficiency, which is not terribly significant. A while back I compared two copper and one helically wound loop to a reference dipole, using the Reverse Beacon Network for comparisons, with interesting results. Section 4 on my QRZ page has the results, if interested. The bottom line is that a helical loop of the same diameter as a 1" copper loop exhibited about 1.5dB less efficiency, and 2.5 dB less efficiency than a 3" copper loop.

By the way, I recommend you measure the bandwidth of your loops at an SWR of 2.6. This corresponds the the -3dB points on the bandwidth curve (7dB return loss.) Of course, this is only accurate if the SWR minimum is very close to 1:1.

Enjoy your loop!

Paul

11076. Re: [loopantennas] Re: Highest Q loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-19 02:32:28 UTC
From: Mike Penkas
Topic: 11049 Message: 11076

Thanks Paul,
Extremely interesting and informative. Yes--I meant 19 foot circumference. I currently have a very high current 350pf VVC in customs-should be here next week. I am also waiting for all the parts for the automatic Stepper controller I am building. I was going to just put it on the helically wound loop but I just might use some of the excess 7/8 Andrews heliax I have laying around and see how that performs.
Looks like I might need a 8 foot loop to get me on the low end of 80 with the 7/8 hardline and 350pf.
Mike WA8EBM

Sent from my iPad

> On Jun 18, 2015, at 08:28, k4hkx@paulcasper.com [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Hi Andy,
>
>
> I'm sure you meant 19ft circumference! Anyway, you are right, the main advantage of a helically wound loop is increased inductance, which enables a smaller capacitor to be used for a given frequency, or a smaller loop for the same size cap. The tradeoff is a little loss in efficiency, which is not terribly significant. A while back I compared two copper and one helically wound loop to a reference dipole, using the Reverse Beacon Network for comparisons, with interesting results. Section 4 on my QRZ page has the results, if interested. The bottom line is that a helical loop of the same diameter as a 1" copper loop exhibited about 1.5dB less efficiency, and 2.5 dB less efficiency than a 3" copper loop.
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>
> Enjoy your loop!
>
> Paul
>

11077. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-19 20:16:33 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11077

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /loop balun experiment.pdf
Uploaded by : everettsharp74 <everettsharp@...>
Description : Experimenting with different Baluns on a 275' Horizontal
Multi-Band Loop Antenna

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/loop%20balun%20experiment.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

everettsharp74 <everettsharp@...>

11078. Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-26 11:28:16 UTC
From: Andrew Ikin
Topic: 11078 Message: 11078

Hello Group,

Approximately 8 weeks ago fellow group member Steve Ratzlaff and I had an discussion about the noise performance of amplifiers for Non Directional Beacon work. Steve suggested that it may be a good idea to look at the Antenna Amplifier noise floor with a simulated antenna inductance, rather than using a resistance equal to the amplifier input z.

Steve's suggestion makes perfect sense when one considers that the real and radiation resistance of loop antennas are very small in comparison to the loops inductance.

First I retested two active antennas; Wellbrook's ALA100 and ALA100LN in the paddock using 20m circumference loops. Loop area 21 sq.m. Both antenna use noiseless feedback. The ALA100 uses Bipolar transistors, the ALA100LN uses JFETS.

The gain comparison on MW/LW was an increase of 2-4dB in favour of the ALA100LN.

Unfortunately the ambient noise level was too high to see any noise floor difference.

Next; Bench Tests (gain and Noise Figure NF of both ALA100 amps.) were conducted using a Marconi 2019A Sig. Gen. and WinRadio Excalibur. A 9dB Norton amplifier in the Antenna Interface was used to ensure that the total gain was approx. 10dB higher than the Excalibur NF. Thus to ensure that the higher amplifier gain would mask the receiver NF affecting the measurements. A 20uH inductor was used to simulate the loop’s reactance.

The NF was measured using the gain method i.e. the excess noise above the amplifier gain when the input is terminated with a resistor. The negative NF is measured with a inductance connected to the amplifier input.

Both ALA100s have an approx. 50 Ohm resistive input z as determined using an Array Solutions AIM 4170C Antenna Analyser.

WinRadio Excalibur set 1kHz BW and the S Meter to RMS AVG.

-144dBm is used as reference for the 1kHz BW

The negative NF is defined as the amplifier noise being less than the increase in noise due to the amplifier gain.

Test results.

Old ALA100 1MHz gain = 27dB (18dB with Passive Interface)

Noise with 50 Ohm input = −116dBm

NF = 1.0dB

Noise with 20uH input = −118dBm (-127dBm with Passive Interface)

NF = −1dB.

New ALA100LN 1MHz gain = 28dB (19dB with Passive Interface)

Noise with 50 Ohm input = −116dBm

NF = 0.0dB

Noise with 20uH input = −124dBm (-133dBm with Passive Interface)

NF = −8dB.

3 other ALA100LNs were tested, the worst case was a -6dB NF.

Looking at the above one can see that there is only a 1dB difference in the gain and NF of the two Head amps with a 50 Ohm input.

The apparent -1dB NF of the ALA100 with the 20uH input is probably due to the fact that Inductors are noiseless compared to a 50 Ohm resistor.

However, what is striking, is the apparent high negative NF of the ALA100LN. My first thoughts were when this showed up, that the gain had dropped by 8dB because of the loop inductance and this would show up as low antenna gain. However, the on air comparison suggested that this wasn't the case. Also Dave Aichelman ran some comparative tests confirming my observations.

I do not have an explanation yet as to why the ALA100LN has an apparent negative NF or why the noise floor drops by 8dB, but it certainly accounts as to why some users are seeing improved performance. The theoretical NF of the ALA100LN is close to 0dB.

One could speculate that there is a significant mismatch of the antenna noise from its real and radiation resistance being a small fraction of the amplifier input z. However, I have only been able to achieve a significant negative NF using JFETS.

The ALA100LN uses 8 x J309 Fets. with noiseless feedback.

The negative NF can be increased to approx. -10dB by altering the feedback and increasing the amplifier gain. Also the negative NF increases by a couple of dB where the loop inductance is higher e.g. a 20m circumference thin wire loop (30uH). Also the negative NF is maintained as the frequency rises.

The ALA100LN has a sister, “Florence” the FLG100LN with an input matching/isolation transformer of 1152 Ohms for Terminated loop antennas e.g. Flag and KAZ. However, the antenna termination resistance makes the negative NF feature unrealisable.

One may ask what is the significance of the amplifier having a negative noise figure of -8dB?

It basically means, that there is the potential of an 11dB s/n improvement when compared to a conventional amplifier of the same gain and NF of say 3dB with a similar loop size. This feature could be used to compensate for any mismatch loss over wide bandwidths.

Additionally the negative noise figure could compensate for usual NF degradation when loops are run as close spaced Phase Arrays.

I am currently exploring to see if the apparent negative NF can be exploited with smaller loops. To this end I have extended the bandwidth of the ALA100LN from 10MHz to 30MHz by

configuring the FETs to run in cascode with two Bipolar devices. However, there may be a bandwidth limitation due to the fixed input impedance of the amplifier compared to the ALA1530 with its loop/amp. impedance tracking verses frequency.

73

Andrew Ikin

11079. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-26 13:13:17 UTC
From: T. Hills
Topic: 11078 Message: 11079

Andrew,

The apparent negative noise factor is *probably* a result of the low DC resistance of the inductor effectively damping the noise generated by any semiconductor junction. I don't have the schematic for the ALA100 but I'd bet the majority of the noise comes from the G/DS junction of the input J309s getting amplified in the following stage(s). Try a short across the input and see if you get a similar result.

Experimenting with tuned receiving loops I've found that the noise is much higher when using a high impedance amplifier on the tuned section and can be pushed below the atmospheric noise floor on LW/MW by using a small, low impedance pickup loop with an air wound or a single turn or 2T center tapped for balanced output on a ferrite feeding a high impedance common source input stage. That may fly in the face of "conventional wisdom" but it works.

Tim Hills
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>an discussion about the noise performance of amplifiers for Non
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>
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>
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>

>
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>73
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>
>
> Andrew Ikin
>
>----------

11080. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-26 18:55:51 UTC
From: Andrew Ikin
Topic: 11078 Message: 11080

Tim,

The amp. without the loop has a low dc resistance due to its input transformer. When the loop is disconnected the noise is at its lowest. Similar designs using bipolars can a have say a −1 or −2dB NF. Dmos fets e.g. BS170 do the opposite and have a +8dB NF.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Friday, June 26, 2015 2:13 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Negative Noise Figure loop Amplifier

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73

Andrew Ikin

11081. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-26 19:27:19 UTC
From: Richard (Rick) Karlquist
Topic: 11078 Message: 11081

On 6/26/2015 11:55 AM, Andrew Ikin andrew.ikin@...
[loopantennas] wrote:
> Tim,
> The amp. without the loop has a low dc resistance due to its input
> transformer. When the loop is disconnected the noise is at its lowest.
> Similar designs using bipolars can a have say a −1 or −2dB NF. Dmos fets
> e.g. BS170 do the opposite and have a +8dB NF.
> 73
> Andrew

JFET's, unless MOSFET's, DMOS, or epHEMT, have virtually no
current noise, just the shot noise of the gate current.
This current is often picoamps. There voltage noise is the same as
whatever a resistor would have if its resistance were equal to the
channel resistance. The effective noise temperature (in
the optimum circuit) is in the few 10's of Kelvin. I have actually
measured this. If you parallel a lot of JFET's or use ones with large
geometry (essentially the same as paralleling) the noise voltage
goes down as sqrt(N). The noise current goes up, but was
almost nothing to begin with. The limit of what you can
do with this technique is due to the build up of capacitance.

When you use JFET's, the idea of a "conjugate" match or matching
for maximum power transfer is not applicable. Basically, the
JFET is an open circuit input and connects to your transducer.
A low noise amplifier is always mismatched to the source.
In any event, a loop antenna always has an inherent noise temperature
of room temperature due to the Johnson noise of its copper resistance,
and the best any amplifier can do is to add negligible noise to
this resistance. The extreme low noise temperature of the JFET
goes to waste here. You can do just about as well with a bipolar
transistor. Do not use a MOSFET or epHEMT because the 1/f noise
is bad.

The idea that "the noise goes up less than the gain of
the amplifier, so therefore NF is negative" is due to a misunderstanding
of NF.

Rick N6RK

11082. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-26 22:23:32 UTC
From: Andrew Ikin
Topic: 11078 Message: 11082

Rick N6RK wrote on June 26.
<JFET's, unless MOSFET's, DMOS, or epHEMT, have virtually no
current noise, just the shot noise of the gate current.
This current is often picoamps. There voltage noise is the same as
whatever a resistor would have if its resistance were equal to the
channel resistance. The effective noise temperature (in
the optimum circuit) is in the few 10's of Kelvin. I have actually
measured this. If you parallel a lot of JFET's or use ones with large
geometry (essentially the same as paralleling) the noise voltage
goes down as sqrt(N). The noise current goes up, but was
almost nothing to begin with. The limit of what you can
do with this technique is due to the build up of capacitance.

When you use JFET's, the idea of a "conjugate" match or matching
for maximum power transfer is not applicable. Basically, the
JFET is an open circuit input and connects to your transducer.
A low noise amplifier is always mismatched to the source.
In any event, a loop antenna always has an inherent noise temperature
of room temperature due to the Johnson noise of its copper resistance,
and the best any amplifier can do is to add negligible noise to
this resistance. The extreme low noise temperature of the JFET
goes to waste here. You can do just about as well with a bipolar
transistor. Do not use a MOSFET or epHEMT because the 1/f noise
is bad.

The idea that "the noise goes up less than the gain of
the amplifier, so therefore NF is negative" is due to a misunderstanding
of NF.>

Rick, thank you for your comments and explanation. I did use the word “apparent” negative noise figure and did suggest that there is a mismatch situation. However, I am not aware of any bipolar transistor design that would be as useful in this application.
The main point I am trying to make is, that by using JFETS for a loop amplifier there is the potential of realizing lower noise compared to more conventional designs.

73

Andrew

11083. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-27 02:58:28 UTC
From: gnuarm.2007@...
Topic: 11078 Message: 11083

Perhaps you can help me understand what you are saying by indicating clearly how you calculated the NF? My understanding is that it is conventionally defined by

NF = SNRin / SNRout

The other Rick

---In loopantennas@yahoogroups.com, <andrew.ikin@...> wrote :

Rick, thank you for your comments and explanation. I did use the word “apparent” negative noise figure and did suggest that there is a mismatch situation. However, I am not aware of any bipolar transistor design that would be as useful in this application.
The main point I am trying to make is, that by using JFETS for a loop amplifier there is the potential of realizing lower noise compared to more conventional designs.

11084. 12 Volt Antenna Interface Wellbrook Ala 1530 - 1530 LF

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-27 23:04:47 UTC
From: stargate19@...
Topic: 11084 Message: 11084

Good evening all visitors to the group.
I would plan to buy the Spare Loop Amplifer of Wellbrook 1530 Ala or Ala 1530LF, to make a loop amplified with lower spending. Someone to tell me if Antenna Interface 12 volt regulated power supply is passive? And if so where to find an appropriate scheme? Thanks. Sorry for my bad English.

Salvo.

11085. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-27 23:55:10 UTC
From: Alex
Topic: 11078 Message: 11085

Andrew,
Without knowing the exact circuit and components that you are using, it is difficult to be helpful but here are my comments. As I understand what you've described, if you put an inductor from the FET gate circuit to ground you have created a low pass filter and/or have added and shifted the poles and zeros such that the system may no longer be as flat as before. As you are aware, smaller bandwidth means less noise and lower NF. There may even be some parasitic resonances. Have you modeled the circuit in Spice and run a bode plot?? Have you performed an S21 plot with a VNA?

Agree with Rick, the J309 fet intrinsically has extremely low gate current hence high impedance ...having modeled and built bunches of J309 circuits for RF input amps over the years, there is very little difference in having a 1K "match" or a 1Meg "match". Also, if you are using a less than optimum test set-up on the bench, such as test leads and probes that create current loops, the test setup would be picking up E or H field noise or the probe circuit can become resonant or have increased Q. If you are using coax with connectors, the coax will have parasitic and harmonic resonances that will affect the reading in conjunction with the added inductor.

Alex

From: "'Andrew Ikin' andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Friday, June 26, 2015 4:28 AM
Subject: [loopantennas] Negative Noise Figure loop Amplifier

Hello Group, Approximately 8 weeks ago fellow group member Steve Ratzlaff and I had an discussion about the noise performance of amplifiers for Non Directional Beacon work. Steve suggested that it may be a good idea to look at the Antenna Amplifier noise floor with a simulated antenna inductance, rather than using a resistance equal to the amplifier input z. Steve's suggestion makes perfect sense when one considers that the real and radiation resistance of loop antennas are very small in comparison to the loops inductance. First I retested two active antennas; Wellbrook's ALA100 and ALA100LN in the paddock using 20m circumference loops. Loop area 21 sq.m. Both antenna use noiseless feedback. The ALA100 uses Bipolar transistors, the ALA100LN uses JFETS. The gain comparison on MW/LW was an increase of 2-4dB in favour of the ALA100LN.Unfortunately the ambient noise level was too high to see any noise floor difference. Next; Bench Tests (gain and Noise Figure NF of both ALA100 amps.) were conducted using a Marconi 2019A Sig. Gen. and WinRadio Excalibur. A 9dB Norton amplifier in the Antenna Interface was used to ensure that the total gain was approx. 10dB higher than the Excalibur NF. Thus to ensure that the higher amplifier gain would mask the receiver NF affecting the measurements. A 20uH inductor was used to simulate the loop’s reactance. The NF was measured using the gain method i.e. the excess noise above the amplifier gain when the input is terminated with a resistor. The negative NF is measured with a inductance connected to the amplifier input. Both ALA100s have an approx. 50 Ohm resistive input z as determined using an Array Solutions AIM 4170C Antenna Analyser. WinRadio Excalibur set 1kHz BW and the S Meter to RMS AVG. -144dBm is used as reference for the 1kHz BW The negative NF is defined as the amplifier noise being less than

the increase in noise due to the amplifier gain. Test results. Old ALA100 1MHz gain = 27dB (18dB with Passive Interface)Noise with 50 Ohm input = −116dBmNF = 1.0dB Noise with 20uH input = −118dBm (-127dBm with Passive Interface)NF = −1dB. New ALA100LN 1MHz gain = 28dB (19dB with Passive Interface)Noise with 50 Ohm input = −116dBmNF = 0.0dBNoise with 20uH input = −124dBm (-133dBm with Passive Interface)NF = −8dB. 3 other ALA100LNs were tested, the worst case was a -6dB NF. Looking at the above one can see that there is only a 1dB difference in the gain and NF of the two Head amps with a 50 Ohm input. The apparent -1dB NF of the ALA100 with the 20uH input is probably due to the fact that Inductors are noiseless compared to a 50 Ohm resistor. However, what is striking, is the apparent high negative NF of the ALA100LN. My first thoughts were when this showed up, that the gain had dropped by 8dB because of the loop inductance and this would show up as low antenna gain. However, the on air comparison suggested that this wasn't the case. Also Dave Aichelman ran some comparative tests confirming my observations. I do not have an explanation yet as to why the ALA100LN has an apparent negative NF or why the noise floor drops by 8dB, but it certainly accounts as to why some users are seeing improved performance. The theoretical NF of the ALA100LN is close to 0dB. One could speculate that there is a significant mismatch of the antenna noise from its real and radiation resistance being a small fraction of the amplifier input z. However, I have only been able to achieve a significant negative NF using JFETS. The ALA100LN uses 8 x J309 Fets. with noiseless feedback.The negative NF can be increased to approx. -10dB by altering the feedback and increasing the amplifier gain. Also the negative NF increases by a couple of dB where the loop inductance is higher e.g. a 20m circumference thin wire loop (30uH). Also the negative NF is maintained as the frequency rises. The ALA100LN has a sister, “Florence” the FLG100LN with an input matching/isolation transformer of 1152 Ohms for Terminated loop antennas e.g. Flag and KAZ. However, the antenna termination resistance makes the negative NF feature unrealisable. One may ask what is the significance of the amplifier having a negative noise figure of -8dB?It basically means, that there is the potential of an 11dB s/n improvement when compared to a conventional amplifier of the same gain and NF of say 3dB with a similar loop size. This feature could be used to compensate for any mismatch loss over wide bandwidths. Additionally the negative noise figure could compensate for usual NF degradation when loops are run as close spaced Phase Arrays. I am currently exploring to see if the apparent negative NF can be exploited with smaller loops. To this end I have extended the bandwidth of the ALA100LN from 10MHz to 30MHz by configuring the FETs to run in cascode with two Bipolar devices. However, there may be a bandwidth limitation due to the fixed input impedance of the amplifier compared to the ALA1530 with its loop/amp. impedance tracking verses frequency. 73 Andrew Ikin

11086. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-28 10:49:03 UTC
From: Andrew Ikin
Topic: 11078 Message: 11086

Alex, wrote June 28

<Without knowing the exact circuit and components that you are using, it is difficult to be helpful but here are my comments. As I understand what you've described, if you put an inductor from the FET gate circuit to ground you have created a low pass filter and/or have added and shifted the poles and zeros such that the system may no longer be as flat as before. As you are aware, smaller bandwidth means less noise and lower NF. There may even be some parasitic resonances. Have you modeled the circuit in Spice and run a bode plot?? Have you performed an S21 plot with a VNA?

Agree with Rick, the J309 fet intrinsically has extremely low gate current hence high impedance ...having modeled and built bunches of J309 circuits for RF input amps over the years, there is very little difference in having a 1K "match" or a 1Meg "match". Also, if you are using a less than optimum test set-up on the bench, such as test leads and probes that create current loops, the test setup would be picking up E or H field noise or the probe circuit can become resonant or have increased Q. If you are using coax with connectors, the coax will have parasitic and harmonic resonances that will affect the reading in conjunction with the added inductor.>

Alex, The ALA100 is a single stage push-pull amp., each transistor is 4 J309s in parallel, the gate and source are transformer coupled to provide low input z. Additionally the gate/source coupling dynamically reduces the source impedance from its static value of 16 Ohm to approx. 1 Ohm. This I believe has a dramatic effect in reducing the NF. The downside to this design is reduced HF gain as a result of the transistor Miller capacitance. Hence, the requirement to add a cascode stage using a pair of 2N4401s in a common base configuration. This also improves the OIP3. Other issues, the gain spread of the J309 means that devices have to be selected in order to secure a +80dBm OIP2.

Normally with fets one needs a high input z >1k to the gate to secure low noise. Which makes them not really suitable for low impedance wideband loops. The above design gets round this problem.

In this past week, the J309s have been replaced with much higher gain devices with a tighter gain spread. This results in a 2dB gain increase and lower IMD at MF; OIP2 +90dBm and OIP3 +49dBm.

73

Andrew

11087. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-29 17:35:57 UTC
From: winston376@...
Topic: 11078 Message: 11087

Andrew,

Very interesting circuit description. OIP3 results are quite good also.

Is the electronic circuit available for review?

Alex

11088. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-29 18:41:13 UTC
From: Paul V Birke PEng
Topic: 11078 Message: 11088

I think NO as that is Andrew's bread and butter
would you release something you spent a lot of time on and got perfected
I think NOT
p

On Monday, June 29, 2015 1:36 PM, "winston376@... [loopantennas]"
<loopantennas@yahoogroups.com> wrote:

  Andrew,

Very interesting circuit description. OIP3 results are quite good also.

Is the electronic circuit available for review?

Alex

11089. Re: Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-30 17:12:07 UTC
From: 3ym3ym@...
Topic: 11078 Message: 11089

Well, Andrew gave all the important info to reproduce the circuit. Details like biasing and power splitting can be easily figured out.
I am surprised that FET input devices yield such good results. There are BJTs that have significantly better voltage noise parameter. FETs have lower current noise, but it is not a factor in the low input impedance application.

As for the NF measurement, this metrics is defined for Z=50 Ohm systems, and extending it to inductive impedance only creates confusion (or possibilities for "creative" advertizing :)). Gain and NF are pretty much meaningless for loop antenna systems and have to be replaced with different parameters, reflecting the combination of the loop and the amplifier. Gain is replaced with antenna factor Ka (or effective height h), and NF is replaced with input noise expressed in field strength: Nfloor = Vnout * Ka in [uV/m] .

Chavdar LZ1AQ has good analysis of loop antenna systems on his site.

73, Mike

11090. Re: [loopantennas] Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-30 18:53:32 UTC
From: winston376@...
Topic: 11078 Message: 11090

Thankyou for your response Andrew.

Alex

11091. Re: [loopantennas] Re: Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-30 19:12:46 UTC
From: kkyahoo
Topic: 11078 Message: 11091

This makes sense to me.

The gain and nf have to be measured consistently. Measuring the gain in a 50 ohm system and the noise with an inductor will definitely give the odd results.

Kevin

----- Original Message -----
From: 3ym3ym@... [loopantennas]
To: loopantennas@yahoogroups.com
Sent: Tuesday, June 30, 2015 6:12 PM
Subject: [loopantennas] Re: Negative Noise Figure loop Amplifier

Well, Andrew gave all the important info to reproduce the circuit. Details like biasing and power splitting can be easily figured out.
I am surprised that FET input devices yield such good results. There are BJTs that have significantly better voltage noise parameter. FETs have lower current noise, but it is not a factor in the low input impedance application.

As for the NF measurement, this metrics is defined for Z=50 Ohm systems, and extending it to inductive impedance only creates confusion (or possibilities for "creative" advertizing :)). Gain and NF are pretty much meaningless for loop antenna systems and have to be replaced with different parameters, reflecting the combination of the loop and the amplifier. Gain is replaced with antenna factor Ka (or effective height h), and NF is replaced with input noise expressed in field strength: Nfloor = Vnout * Ka in [uV/m] .

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73, Mike

11092. Re: [loopantennas] Re: Negative Noise Figure loop Amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-06-30 19:31:05 UTC
From: Andrew Ikin
Topic: 11078 Message: 11092

Mike, wrote on June 30.

>I am surprised that FET input devices yield such good results. There are BJTs that have significantly better voltage noise parameter. FETs have lower current noise, but it is not a factor in the low input impedance application.

As for the NF measurement, this metrics is defined for Z=50 Ohm systems, and extending it to inductive impedance only creates confusion (or possibilities for "creative" advertizing :)). Gain and NF are pretty much meaningless for loop antenna systems and have to be replaced with different parameters, reflecting the combination of the loop and the amplifier. Gain is replaced with antenna factor Ka (or effective height h), and NF is replaced with input noise expressed in field strength: Nfloor = Vnout * Ka in [uV/m] .

Chavdar LZ1AQ has good analysis of loop antenna systems on his site.>

Mike, I have been working with wideband loops for 20 years now using both JFET and BJTs. JFets have always provided a lower NF, but until recently I have only been able to match the IMD performance of Bipolars. I agree that extending NF to inductive z may not be valid, but there is no reason why the amplifier noise floor shouldn’t be stated when terminated with a inductive loop, as this represents its actual use. Gain and NF are important as well as the loop/amp. mismatch with variance in frequency.
The point I am tying to make is that you can have amplifiers that have nearly identical NF and gain in a 50 Ohm system or other impedances, but the JFET one has a much lower noise floor when inductively terminated. Hence, this would provide a more sensitive antenna with the same A F.
Replacing gain with Antenna Factor is all very well for large multi-national companies that have large budgets for antenna calibration and other measurements requiring screened rooms. But for small firms like Wellbrook this cost is out of the question except for the most popular loop; the ALA1530.
73
Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, June 30, 2015 6:12 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: Negative Noise Figure loop Amplifier

Well, Andrew gave all the important info to reproduce the circuit. Details like biasing and power splitting can be easily figured out.
I am surprised that FET input devices yield such good results. There are BJTs that have significantly better voltage noise parameter. FETs have lower current noise, but it is not a factor in the low input impedance application.

As for the NF measurement, this metrics is defined for Z=50 Ohm systems, and extending it to inductive impedance only creates confusion (or possibilities for "creative" advertizing :)). Gain and NF are pretty much meaningless for loop antenna systems and have to be replaced with different parameters, reflecting the combination of the loop and the

amplifier. Gain is replaced with antenna factor Ka (or effective height h), and NF is replaced with input noise expressed in field strength: Nfloor = Vnout * Ka in [uV/m] .

Chavdar LZ1AQ has good analysis of loop antenna systems on his site.

73, Mike

11093. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-01 13:15:25 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11093

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

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>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11094. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-01 13:15:25 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11094

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11095. Tim Forrester

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-13 11:15:37 UTC
From: gail21@...
Topic: 11095 Message: 11095

contacted me recently regarding his Mag loopcontroller, he has a youtube of the early stages of construction
and is now at manufacture process.
G4WIM Auto Tune QRO Mag Loop 3.7MHz to 14.6MHz https://www.youtube.com/watch?v=BZ4HedpjqOY

https://www.youtube.com/watch?v=BZ4HedpjqOY

G4WIM Auto Tune QRO Mag Loop 3.7MHz to 14.6MHz https://www.youtube.com/watch?v=BZ4HedpjqOY
This video shows a magnetic loop I've built which uses a stepper controlled Jennings vacuum variable capacitor along with a Teensy++ controller to automate t...

View on www.youtube.com https://www.youtube.com/watch?v=BZ4HedpjqOY
Preview by Yahoo

"
FYI - just about finished the PCB design for the controller - double sided, plated thru' holes, silk screen and solder resist on both sides.
Mostly leaded thru' hole parts for ease of assembly with only surface mount parts for the RF detectors.
Self contained PCB to drive two steppers and LCD etc , just needs an external directional coupler.

One stepper drives the VVC and the second stepper turns the input loop thru' up to 90 degrees to optimize coupling and match.

I expect to be placing an order for a batch of PCBs very shortly and was wondering if you and or others in the yahoo group would like one ?

I don't know about cost but as the board is approx 4" x 5" it should be too expensive - I would expect £20 maybe less if I order 10 -20 units.

73 Tim G4WIM.
please let me know and I will pass on to Tim

11096. MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-21 17:38:32 UTC
From: fifteenmedium@...
Topic: 11096 Message: 11096

Hi Everyone,
I hope you can help me here. I just bought a second hand MFJ 1786 and can't get the SWR below 3:1 on any band below 15m. It is located on a 10th small balcony. I've looked under the hood and all looks fine and it seems to be working fine. I've reshaped the feed loop, squishing it seems to drop the SWR a bit.

I assume the building is coupling with it but I've looked around the web and seen pictures of these loops in small spaces, close to structure or even indoors and their owners are happy. My building is brick & concrete, the balcony railing is glass, the railing is metal. I can manage about 4 feet of clearance to the walls and elevate it horizontally about a foot above the railing. Still unusable for transmit.

Are they any ways to reduce the SWR? Would changing the feed loop size help? Changing the feed to a gamma match or another type?

Thanks for your input.
73's de Paul VA3ZC in ham radio hell.

11097. Re: [loopantennas] MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-21 22:54:13 UTC
From: Andy
Topic: 11096 Message: 11097

This may be one of those cases where Walt Maxwell's saying, "Too low a(n) SWR can kill you", applies.

An SWR of 3:1 isn't bad. It's not perfect, you won't win any Nobel Prizes with it, but it ain't bad either and you can surely operate with it. At 3:1, the SWR loss is 1.2 dB, or one fifth of an S-unit. Would you notice that?

The only thing is, is your transceiver too picky about SWR? THEN it could be a problem.

And you didn't say how much worse than 3:1 it was on some bands.

But if you want to persist, move it away from the balcony and try it somewhere else. Bring it into the open. Bring it indoors. Re-orient it in the balcony. All these things could affect its SWR somewhat. I'm not saying it solves the problem, but it might.

If your building is concrete and brick, except for the balcony which is a metal frame, then it seems odd in a way that you would want an antenna smack in the middle of the one thing that is metallic, the one worst place for it. I understand the desire to have it away from inhabitants, for their safety. But an antenna doesn't need to be outdoors if the building itself is relatively transparent to RF. It's not like the antenna needs to breathe fresh air. Just because everyone else puts their compact loop in a balcony, doesn't mean you have to. Unless, that is, the building has a steel frame or a lot of Rebar.

Keep in mind, however ... I do not have one of these antennas. I am just speaking on principle.

Of course you probably want to know why your antenna doesn't tune to a lower SWR, or even better, how to change it so it can. I can't say. I *think* it has just the one tuning capacitor. Impedance is two dimensional (mag/phase), so you really need two degrees of freedom = two things to adjust, to be sure you can get the SWR arbitrarily low. By putting it close to your particular metal balcony, in a particular orientation, it might have altered the impedance in a way that the single tuning capacitor cannot compensate for it. Changing the feedloop size *might* help. Changing to a gamma match changes everything, it would be like starting over.

A few weeks ago I saw a youtube video where someone took his MFJ loop apart and found a dead bug in it, which was causing it not to tune up right. It took him quite a while to locate the critter once he had it open.

Regards,
Andy

11098. Re: [loopantennas] MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-22 01:32:19 UTC
From: kevin asato
Topic: 11096 Message: 11098

Interesting. I never quite regarded hardware as buggy! I usually had other words for it when prototyping drivers for it.73,kevinkc6pob

A few weeks ago I saw a youtube video where someone took his MFJ loop apart and found a dead bug in it, which was causing it not to tune up right. It took him quite a while to locate the critter once he had it open.

11099. Re: [loopantennas] MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-22 03:08:26 UTC
From: fifteenmedium@...
Topic: 11096 Message: 11099

Hi Andy,
Thanks for the great reply. I've never thought about 3:1 as down a fifth of an S unit. I'm used to flat or close to flat and start to panic when the needle moves up. The rig is a Yaesu FTdx 1200, fairly sturdy but am I shortening the finals lifespan with an SWR above 2:1? I think I read somewhere that an external tuner cannot be used with the 1786.

The 1786 has a coil at the feed loop. The manual says that you can stretch it or compress it to adjust swr but I'm not sure of it's purpose or which way I should be going. Also steretched and compressed the feed loop itself.

As for my building, it is a reinforced concrete, brick clad structure. Only the strongest HF signals get indoors. I need to get that antenna outside. I'd be pretty happy if I could get the SWR closer to 2:1.

Cheers.
Paul

11100. Re: [loopantennas] MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-22 03:36:24 UTC
From: Andy
Topic: 11096 Message: 11100

"I never quite regarded hardware as buggy!"

Did you know where the term computer "bug" comes from?

The original computer "bugs" were actual bugs (moths) found inside the relays of one of the earliest computers, the Harvard Mark II. Rear Admiral Grace Hopper (one of the developers of COBOL) is credited with first using the term for computers. In those early days, things like relays and switches and patch panels were part of the "programming" that made the computers work. It wasn't until later that they started using stored programs that resided in memory.

Grace Hooper also came up with "debugging". Sometimes it literally meant pulling dead moths out of the hardware.

Andy

11101. Re: [loopantennas] MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-22 03:59:41 UTC
From: Andy
Topic: 11096 Message: 11101

Paul,

I'm not an expert on this, so take whatever I say with a big grain of salt.

"... am I shortening the finals lifespan with an SWR above 2:1?"

I don't think there is such a thing as shortening the finals. They aren't tubes (right?), and transistors shouldn't wear out unless significantly abused, and when they do go it tends to be catastrophic, as in, broken within a few milliseconds. Semiconductors can sometimes suffer slow damage, but it is not common. A well designed transceiver should protect itself and there should be no damage. But sometimes the "protect itself" is in the form of limiting the power as the SWR goes up.

"I think I read somewhere that an external tuner cannot be used with the 1786."

I'm sure that you can. (Well, OK, not 100.0% certain, but I can't think of a reason why you couldn't use one.) It's not always the best idea, because adding an antenna tuner adds a little more loss into the system, but it hopefully is small. You just don't want to rely on the antenna tuner to fix an awful SWR from this antenna when the antenna itself is way out of tune.

I don't see anything wrong with using the rig's internal antenna tuner to take care of that last bit of "flattening" of the SWR.

In tube days you wouldn't care what the SWR was; you would have tuned the finals. That's pretty much the same thing as using the antenna tuner.

"As for my building, it is a reinforced concrete ..."

Ah-ha. Reinforced. That means Rebar. You do need to get the antenna out of that "cage". The balcony is only partly better because it is probably half a cage.

Regards,
Andy

11102. Re: MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-22 13:13:45 UTC
From: georgec@...
Topic: 11096 Message: 11102

Paul, are you certain that the antenna is tuning when you push the up/down buttons on the control box? Can you hear the receiver noise level peak at some point in tuning it? The antenna's capacitor may not be moving, no tuning, high vswr. This type of antenna will not work with a conventional tuner. The antenna itself must be resonant at the operating frequency to perform at all. If the antenna is say, 20 khz or more off resonance its performance is horrible. Tuning the line with an external tuner or whats in the rig simply turns it all into a dummy load.

So you need to verify that the capacitor is tuning when you press up or down on the control box.

How does it perform on 15 and above? Can you tune it there? If it does tune with your symptoms I'd look for a mechanical block on the capacitor's movement as it goes to increase capacity.

Just some thoughts after using a loop for a long time.

GeorgeC
W2DB

11103. Re: MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-07-22 17:42:49 UTC
From: fifteenmedium@...
Topic: 11096 Message: 11103

Hi George,
Thanks for your input. I've had it apart and can verify that the cap is moving.

I've been doing some experimenting with the placement on the balcony. Today I have it tight against the brick/glass wall and as far as possible from the railing. The SWR has dropped to as acceptable 2:1.I'm on wspr at the moment getting pretty reports running 10 watts. E50W in the North Cook Islands is reporting an SNR of -25db. Not very strong but not bad for 9,770 km.

I need to do more experimentation to find the optimum position but I am becoming a believer in this loop.

Thanks!
Paul VA3ZC

11104. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-08-01 13:01:55 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11104

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
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http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11105. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-08-01 13:01:55 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11105

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11106. Mounting Vacuum Variable Capacitors on Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-08-16 03:29:52 UTC
From: N7RJN@...
Topic: 11106 Message: 11106

Does anyone have any suggestions on physically mounting variable vacuum capacitors on a magnetic loop antenna? I have a Jennings UCFS-250-15S capacitor the includes the FM2 and FM2B flanges, but it is not clear what the best way is to mount the capacitor and connect to a copper loop. Photos of installation would be appreciated.

73,

Bob

11107. Re: Mounting Vacuum Variable Capacitors on Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-08-31 13:37:43 UTC
From: k4hkx@...
Topic: 11106 Message: 11107

Bob,

Check the magnetic loop pictures on my QRZ.com page. You might pick up an idea or two. Email me if you have any questions.

Paul, K4HKX

11108. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-01 11:08:31 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11108

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
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>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
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Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
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http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11109. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-01 11:08:31 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11109

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11110. Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-02 03:43:11 UTC
From: kb8nty@...
Topic: 11110 Message: 11110

The results speak for themselves!

http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf
http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf

11111. Re: Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-02 11:40:14 UTC
From: JRTOW3RD@...
Topic: 11110 Message: 11111

This again? Check a real world long-term user of the RF Pro-1a antenna, like me (I am 'JRT3' of eHam's reviews.). I bought both a Pro-1a and a Palstar R30A when the latter had just replaced the earlier R30 model - some 6.5+ years ago. I was attempting to restart my longtime SWL/DXer hobby, which had started at my former house with my 150 ft long wire antenna, which I had erected in 1976. Bothered from day one by aperiodic powerline noise, always traced to the pole in front of my home - and the high tension feeds to my subdivision, repeated calls to AL Power Co. offered no improvements. Over the years, many antennas were tried, including dipoles, slopers, & TTFD. All eventually were abandoned, many because my tree supports died. Then, along came the Pro-1a - mounted on a five foot mast from my back deck's apron, it would effectively null the noise source from in front of my house! I had good listening for a while - then the deadly 1/2012 tornado hit.

I was spared a direct hit, although my neighbors on the next block - and the subdivision's power poles - weren't so lucky. My deck furniture and eave hung wind chimes, along with some roof tiles were my only casualties. My Pro-1a had worked loose from it's mount and wound it's RG-6QS around the mast. I loosened it's mount and unwound the cable - the antenna worked fine, once power was restored - except for the 'new' EMI sources APC left me with - the Pro-1a can only null one directional source at a time - oddly, the one in front of my home was still the strongest. A year and a half later, we had enough of our old neighborhood - and moved to a garden home with an HOA - and no outside antennas allowed. I bought a tripod mast base and carried it and the antenna up the stairs to my tall/steep-roofed attic, placing it in a clear spot and connected it via a "F" connector female-female splice to a line emanating behind my desk. A jumper to the wall connector and I was ready to listen. I replaced CFLs with 6W LEDs and dimmers with switches, leaving me with a fantastic listening site.

The Wellbrook is a great antenna - but it's sealed plastic construction and use of instrument connectors (BNC) has always been cause for concern here. In contrast, the Pro-1a, like the earlier and later variants, is modular, all metal, and uses outdoor rated RG-6 (Quad Shield) cable and easily weather-proofed type F connectors. I bought the crimper tool and a handful of connectors from a local electronics jobber for <$25. The type F male to BNC female adapter needed to make a BNC cable fit the power inserter's output can be easily found - and a BNC/RG-58 cable, with it's sometimes 80% shield (RG-6QS is 100%!), can be used to connect the receiver. I like the Pro-1a, in case you are wondering. And, it's American designed and made.

John

11112. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-03 04:21:32 UTC
From: Jim
Topic: 11110 Message: 11112

The review you cited below is amateurish, at best. No scientific conclusion can be drawn from this "review". There were far to many "other" variables that were not accounted for, making it impossible to draw the conclusion that one antenna is better than the other.

Further information, that is based on sound engineering and test methodologies, is available on the web that compares these loops

Jim
W6AIM

Sent from my iPad

On Sep 1, 2015, at 8:43 PM, "kb8nty@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

> The results speak for themselves!
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>
> http://www.wellbrook.uk.com/reviews/ALA1530-vs-RFPRO-1AReview.pdf
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11113. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-03 12:03:38 UTC
From: JRTOW3RD@...
Topic: 11110 Message: 11113

Ah, "amateurish", indeed! High praise for reviews which had no CV requirement for their posting. If you want a level of professionalism, I'd suggest you look elsewhere - it would seem obvious to me that eHam and a Yahoo! group would just reek of "amateurism", as they are hobby endeavors. My posting was meant to convey my satisfaction with a product I've enjoyed owning and using for over 6.5 years, ie, it's not just something I found compared at a manufacturer's site. Additionally, the eHam review was a follow up to my earlier such post. Apparently they now delete previous posts from the same source.

Oh... what kind of range is "far to many"?

John

11114. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-03 13:16:47 UTC
From: Robert Nobis
Topic: 11110 Message: 11114

John,

Thanks for posting the article. I purchased a Wellbrook ALA-1530 loop about two years ago to use for my “diversity” receive site with my Elecraft K3 transceiver. I have been very pleased with its performance.

So sad that some people have to comment the way they do. You were simply sharing something that you felt others might find useful.

73,

Bob Nobis - N7RJN
n7rjn@...

> On Sep 3, 2015, at 05:03, JRTOW3RD@BELLSOUTH.NET [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
>
> Ah, "amateurish", indeed! High praise for reviews which had no CV requirement for their posting. If you want a level of professionalism, I'd suggest you look elsewhere - it would seem obvious to me that eHam and a Yahoo! group would just reek of "amateurism", as they are hobby endeavors. My posting was meant to convey my satisfaction with a product I've enjoyed owning and using for over 6.5 years, ie, it's not just something I found compared at a manufacturer's site. Additionally, the eHam review was a follow up to my earlier such post. Apparently they now delete previous posts from the same source.
>
>
>
> Oh... what kind of range is "far to many"?
>
>
>
> John
>

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>

11115. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-04 09:41:15 UTC
From: bikeron@...
Topic: 11110 Message: 11115

Just just go listen to different sdr webservers and form your own opinion. My conclusion was that more signals could be heard with the ALA1530 loops compared to the Pixel pro models. What you hear is what you get! You can measure as much as you want but the (live) end result is what counts for me. Mind you there are others like the HDLA models that are also working nice in the same league as the discussed loops.

Regards,
Ron

11116. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-04 10:45:17 UTC
From: clement F59465
Topic: 11110 Message: 11116

Hi to all,

For (ALA1530-vs-RFPRO-1AReview.pdf)

my amplifier of ALA1530S must be faulty because I have lots of carrier all over the spectrum, mediocre result on all bands.

73' F59465 Clem

2015-09-04 11:41 GMT+02:00 bikeron@... [loopantennas] <loopantennas@yahoogroups.com>:

>
>
> Just just go listen to different sdr webservers and form your own opinion.
> My conclusion was that more signals could be heard with the ALA1530 loops
> compared to the Pixel pro models. What you hear is what you get! You can
> measure as much as you want but the (live) end result is what counts for
> me. Mind you there are others like the HDLA models that are also working
> nice in the same league as the discussed loops.
>
> Regards,
> Ron
>
>

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73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube <http://www.youtube.com/F59465swl>

11117. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-04 12:12:07 UTC
From: Andrew Ikin
Topic: 11110 Message: 11117

Clem,

Contact me ex group (andy@...) and lets sort out your loop issue.

73

Andrew Ikin

From: mailto:loopantennas@yahoogroups.com
Sent: Friday, September 04, 2015 11:45 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Hi to all,

For (ALA1530-vs-RFPRO-1AReview.pdf)

my amplifier of ALA1530S must be faulty because I have lots of carrier all over the spectrum, mediocre result on all bands.

73' F59465 Clem

2015-09-04 11:41 GMT+02:00 bikeron@... [loopantennas] <loopantennas@yahoogroups.com>:

Just just go listen to different sdr webservers and form your own opinion. My conclusion was that more signals could be heard with the ALA1530 loops compared to the Pixel pro models. What you hear is what you get! You can measure as much as you want but the (live) end result is what counts for me. Mind you there are others like the HDLA models that are also working nice in the same league as the discussed loops.

Regards,
Ron

--

73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube

11118. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-05 04:41:38 UTC
From: Jim
Topic: 11110 Message: 11118

Ron,

Your methodology does not follow sound engineering practices. Your suggestion leaves so many uncontrolled parameters unaccounted for, allowing you to draw any conclusion you want to draw. Since you are only comparing two antennas, and using your test platform, you would do **just** as good by taking a coin and flipping it in the air. Heads would "prove" the ALA is better, tails would "prove" the Pixel is better. It sounds like your coin flip came up heads.

Jim
W6AIM

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Sent from my iPad

On Sep 4, 2015, at 2:41 AM, "bikeron@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

> Just just go listen to different sdr webservers and form your own opinion. My conclusion was that more signals could be heard with the ALA1530 loops compared to the Pixel pro models. What you hear is what you get! You can measure as much as you want but the (live) end result is what counts for me. Mind you there are others like the HDLA models that are also working nice in the same league as the discussed loops.
>
> Regards,
> Ron
>
>

11119. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-06 17:59:59 UTC
From: kb8nty@...
Topic: 11110 Message: 11119

Yes Robert..Indeed a nerve has been struck. I was just sharing some info for others to possibly enjoy.
Believe it if you want or not-that is ok.

I personally refuse to get into a spat with such....

I also see the Elecraft fan's who get quite defensive if someone make a comment or reference regarding that gear.

When someone spends lots of money on a piece of equipment regardless of its true performance they are inclined to defend the heck out of it!

Having also the chance to do some A-B testing indeed the Wellbrook out performed the Pixel...Scientific..No..but who cares it was me all about which one performed better in my personal application.

Enjoy your Wellbrook, I sure do. And the customer service I have received from Andrew has been far superior to some other "made in US" gear I have experienced....

In closing my post was only meant to share and enjoy with those who shared similar interest...not to create issues or upset others.

Geeze I now see why there is not much activity on these groups.

With Kind Regards....

11120. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-06 22:24:54 UTC
From: Jim
Topic: 11110 Message: 11120

I think you are taking the responses in the wrong manner.

I would much rather have a fact based, scientific review of a product that is based on engineering principles.

The URL you mentioned in your post is a review that is NOT repeatable and would not withstand a peer review. My intent was to point that out. It had nothing to do with monies spent nor customer support.

Enjoy your Wellbrook.

Jim
W6AIM

.

Sent from my iPad

On Sep 6, 2015, at 12:59 PM, "kb8nty@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

> Yes Robert..Indeed a nerve has been struck.
>
> I was just sharing some info for others to possibly enjoy.
> Believe it if you want or not-that is ok.
>
> I personally refuse to get into a spat with such....
>
> I also see the Elecraft fan's who get quite defensive if someone make a comment or reference regarding that gear.
>
> When someone spends lots of money on a piece of equipment regardless of its true performance they are inclined to defend the heck out of it!
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> Having also the chance to do some A-B testing indeed the Wellbrook out performed the Pixel...Scientific..No..but who cares it was me all about which one performed better in my personal application.
>
> Enjoy your Wellbrook, I sure do. And the customer service I have received from Andrew has been far superior to some other "made in US" gear I have experienced....
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> In closing my post was only meant to share and enjoy with those who shared similar interest...not to create issues or upset others.
>
> Geeze I now see why there is not much activity on these groups.
>
> With Kind Regards....

>
>
>

11121. RE: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-06 22:47:39 UTC
From: Fredric J. Einstein
Topic: 11110 Message: 11121

I purchased a Wellbrook ALA-1530 about 10 years ago when I was living in the Detroit area and found it unfortunately to be totally deaf. I also had a Cushcraft vertical antenna which worked wonderfully for both SWL'ing and ham radio work. The owner of Wellbrook, Mr. Iken worked with me (sending me replacement loops and control boxes) and eventually refunded the purchase price (although I was "out" the very expensive shipping costs back-and-forth to the U.K.) when the problems with the antenna in my particular location couldn't be solved. My location may have been the problem. I lived about a city block away from 5 very powerful FM broadcast towers in one of the near-northern suburbs of Detroit. My vertical, even in the close proximity to these FM stations, was always able to perform very well on all bands from AM broadcast to 10 meters, but the Wellbrook, as I said, was totally deaf in my location. No signal, even on strong local AM stations and totally silent on the shortwave bands.

I'm wondering if any of the "loop experts" on this mailing list might be able to venture a guess as to why I had such bad luck with the Wellbrook, which had wonderful reviews and is obviously a great performer in most circumstances. Did the close proximity to the FM broadcast stations have anything to do with it?

11122. Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-06 23:17:46 UTC
From: Phillips
Topic: 11122 Message: 11122

Hi Group,
I thought that I would build my ultimate AM/LW loop antenna and I am hoping that the group could offer me any advice if I am going seriously wrong.
I started with the maximum size loop that I could physically handle by myself and came up with a square loop with 7 foot sides (10 foot diagonals) mounted in a diamond orientation. Timber construction.At each apex, I plan a "spreader" 3 feet long at right angles to the diagonals.For wire, the plan is to use the outer braid of 75Ohm TV coax - 8 turns wound on the spreaders. This gives a turn spacing of about 4 inches and a conductor diameter of about 4-6mm.
The whole shebang will be remotely tuned using varactors and buffered via a FET balanced amplifier with cat6 cable providing the power, tuning and switching voltages. The cat6 might also provide an unbalanced signal path down one of the twisted pairs or balanced down split pairs depending on how many conductors are spare after the power, tuning and switching.
I have not found a loop calculator that can confidently handle a loop this size and so am flying blind in regards to predicted performance.
Loop inductance is not a problem because I can adapt the varactor tuner to suit. Stray capacitance is a problem due to its effect on the upper end of the tuning range and I would like to minimise the amount of band switching by keeping the stray capacitance to a minimum.
The loop will be erected in a suburban environment with pole-mounted mains supply, a nearby plasma TV, and under the training path of a busy light-aircraft airfield.
Does the design have any glaring errors? Can anyone see a simple way to improve its performance without increasing the loop size or costing lotsaloot?

Thanx in advance,
Ray

COLEMAK The keyboard layout for rational thinkersAvailable for Windows, Mac, Linux & AndroidTraining at http://thetypingcat.com/course/colemak

11123. Re: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-06 23:38:57 UTC
From: Steve Frost
Topic: 11122 Message: 11123

I have built some very similar...10 foot diameter octagonal loop (6 turns spiral wound) and varactor tuned. It was made for the AM broadcast band. It works great but when the varactors are tuned precisely on a station, the antenna re radiates some of the signal and it is picked up by the cat5 cable that supplies the varactors. The result is that the antenna detunes in accordance with the received signal and the sound is raspy. I have to tune the antenna slightly off resonance and this clears up. Soooo the advice I would give you us to use shielded cat 6 for supplying the varactors.

Good luck and keep us posted how it works out. Steve VE9SF

On 9/6/2015 8:17 PM, Phillips phillicom@... [loopantennas] wrote:
> Hi Group,
> I thought that I would build my ultimate AM/LW loop antenna and I am hoping that the group could offer me any advice if I am going seriously wrong.
> I started with the maximum size loop that I could physically handle by myself and came up with a square loop with 7 foot sides (10 foot diagonals) mounted in a diamond orientation. Timber construction.At each apex, I plan a "spreader" 3 feet long at right angles to the diagonals.For wire, the plan is to use the outer braid of 75Ohm TV coax - 8 turns wound on the spreaders. This gives a turn spacing of about 4 inches and a conductor diameter of about 4-6mm.
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> Loop inductance is not a problem because I can adapt the varactor tuner to suit. Stray capacitance is a problem due to its effect on the upper end of the tuning range and I would like to minimise the amount of band switching by keeping the stray capacitance to a minimum.
> The loop will be erected in a suburban environment with pole-mounted mains supply, a nearby plasma TV, and under the training path of a busy light-aircraft airfield.
> Does the design have any glaring errors? Can anyone see a simple way to improve its performance without increasing the loop size or costing lotsaloot?
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>
> Thanx in advance,
> Ray
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>
>
> COLEMAK The keyboard layout for rational thinkersAvailable for Windows, Mac, Linux &

AndroidTraining at http://thetypingcat.com/course/colemak
>

11124. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-06 19:56:54 UTC
From: Jim Wiley
Topic: 11110 Message: 11124

well put....I've seen all kinds of negative bs on here as well as some well informed postings

From: "kb8nty@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Sunday, September 6, 2015 10:59 AM
Subject: Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yes Robert..Indeed a nerve has been struck.I was just sharing some info for others to possibly enjoy.Believe it if you want or not-that is ok.
I personally refuse to get into a spat with such....

I also see the Elecraft fan's who get quite defensive if someone make a comment or reference regarding that gear.
When someone spends lots of money on a piece of equipment regardless of its true performance they are inclined to defend the heck out of it!
Having also the chance to do some A-B testing indeed the Wellbrook out performed the Pixel...Scientific..No..but who cares it was me all about which one performed better in my personal application.
Enjoy your Wellbrook, I sure do. And the customer service I have received from Andrew has been far superior to some other "made in US" gear I have experienced....
In closing my post was only meant to share and enjoy with those who shared similar interest...not to create issues or upset others.
Geeze I now see why there is not much activity on these groups.
With Kind Regards....

11125. Re: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-07 04:08:30 UTC
From: Richard (Rick) Karlquist
Topic: 11122 Message: 11125

A preamp for AM BCB makes no sense with a 28 foot
perimeter loop, considering the very strong signals
on every channel. Here is a design for a remote
varactor tuned loop that uses coax for feedline
and runs the varactor DC over the coax:

http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

Although the article describes a version for 160 and 80
meters, it is simple to add more varactors to cover the
AM BCB. No CAT6 is required. It uses just one turn.
Multiple turns are unnecessary.

This is a proven design; why reinvent the wheel?

Rick N6RK

On 9/6/2015 4:38 PM, Steve Frost sfrost6572@... [loopantennas] wrote:
> I have built some very similar...10 foot diameter octagonal loop (6
> turns spiral wound) and varactor tuned. It was made for the AM
> broadcast band. It works great but when the varactors are tuned
> precisely on a station, the antenna re radiates some of the signal and
> it is picked up by the cat5 cable that supplies the varactors. The
> result is that the antenna detunes in accordance with the received
> signal and the sound is raspy. I have to tune the antenna slightly off
> resonance and this clears up. Soooo the advice I would give you us to
> use shielded cat 6 for supplying the varactors.

11126. Re: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-07 05:53:32 UTC
From: John
Topic: 11122 Message: 11126

Loops are used by AM broadcast band DXers mainly to rotate to null out a stronger signal to receive a weaker one on the same freq or to null out a powerhouse signal on an adjacent channel. For the ultimate rejection, the loop needs to tilt, not just rotate in a horizontal plane. That's not easy to do with really large loops.

If the aim of the loop is to null out a single interference source, I would suspect that if the noise source were close to the loop, the RF field might not be uniform and impinge unevenly on a large loop such that a small loop would have better nulling. That would make for an interesting field test to see if true.

If the goal is just to pick up a large signal, an active monopole antenna would be much easier to build.

John

On 9/6/2015 4:17 PM, Phillips phillicom@... [loopantennas] wrote:
>
>
> Hi Group,
>
> I thought that I would build my ultimate AM/LW loop antenna and I am
> hoping that the group could offer me any advice if I am going seriously
> wrong.
>
> I started with the maximum size loop that I could physically handle by
> myself and came up with a square loop with 7 foot sides (10 foot
> diagonals) mounted in a diamond orientation. Timber construction.
> At each apex, I plan a "spreader" 3 feet long at right angles to the
> diagonals.
>

11127. Re: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-07 13:21:03 UTC
From: W2XJ
Topic: 11122 Message: 11127

I partially disagree. Yes, loops can null specific sources of noise or interference but they also reject a lot of noise that a monopole receives. A monopole is good for transmitting but no very good receiving.

Sent from my iPad

> On Sep 7, 2015, at 1:53 AM, John jlkolb@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
>
> Loops are used by AM broadcast band DXers mainly to rotate to null out a
> stronger signal to receive a weaker one on the same freq or to null out
> a powerhouse signal on an adjacent channel. For the ultimate rejection,
> the loop needs to tilt, not just rotate in a horizontal plane. That's
> not easy to do with really large loops.
>
> If the aim of the loop is to null out a single interference source, I
> would suspect that if the noise source were close to the loop, the RF
> field might not be uniform and impinge unevenly on a large loop such
> that a small loop would have better nulling. That would make for an
> interesting field test to see if true.
>
> If the goal is just to pick up a large signal, an active monopole
> antenna would be much easier to build.
>
> John
>
>> On 9/6/2015 4:17 PM, Phillips phillicom@hotmail.com [loopantennas] wrote:
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>> Hi Group,
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>> I thought that I would build my ultimate AM/LW loop antenna and I am
>> hoping that the group could offer me any advice if I am going seriously
>> wrong.
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>> I started with the maximum size loop that I could physically handle by
>> myself and came up with a square loop with 7 foot sides (10 foot
>> diagonals) mounted in a diamond orientation. Timber construction.
>> At each apex, I plan a "spreader" 3 feet long at right angles to the
>> diagonals.
>
>
> ------------------------------------
>

> ----------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!
> ----------
>
> Yahoo Groups Links
>
>
>
>

11128. Re: MFJ 1786 High SWR

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-07 13:54:42 UTC
From: borjamar@...
Topic: 11096 Message: 11128

Try to place it so that the loop's plane is perpendicular to the balcony.

I've got a 1788 indoors and I have had problems with a curtain rail.

73 de Borja, EA2EKH

11129. RE: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-07 23:22:05 UTC
From: Phillips
Topic: 11122 Message: 11129

Gentlemen,
I am blown away by the promptness and expertise of your replies. The design will be modified in accordance with advice received. The loop will now be tapped so that I can set the best conditions for my target frequencies. Having the ability to change the inductance will also make the tuner easier to operate -bonus. I am targeting 200KHz to 1710KHz and am looking for as much DX performance as I can get.
Advice re crosstalk in cat5/6 cables means that precautions can be taken at the outset instead of spending hours chasing a problem later. It looks like I will be spending some time on shielding and isolating.
I would love to make the loop tilt. In the corner of my mind is a screw jack and occy strap concoction that might, one day, do the job. Maybe I should look closer at what techniques back yard astronomers use to position their telescopes.
Now that what passes for winter here is over (well almost) I will brave the outside world and start construction today.

Thank you heaps for your input. I will put your posts into a special folder and use them as a reference volume.

COLEMAK The keyboard layout for rational thinkersAvailable for Windows, Mac, Linux & AndroidTraining at http://thetypingcat.com/course/colemak

11130. Re: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-07 20:18:29 UTC
From: Steve Frost
Topic: 11122 Message: 11130

Good article Rick...I am planing on building another loop and will base it on this design. However, instead of coax, I have lots of twenty foot 3/8 inch aluminum rods that I plan to use. I intend to use the outer conductor of RG-6 as the antenna inside of the aluminum rods. The main reason is for mechanical considerations, but it seems to me that the aluminum rod is more magnetically transparent than the braid of the coax. 73....Steve VE9SF

On 9/7/2015 1:08 AM, 'Richard (Rick) Karlquist' richard@...
[loopantennas] wrote:
> A preamp for AM BCB makes no sense with a 28 foot
> perimeter loop, considering the very strong signals
> on every channel. Here is a design for a remote
> varactor tuned loop that uses coax for feedline
> and runs the varactor DC over the coax:
>
> http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf
>
> Although the article describes a version for 160 and 80
> meters, it is simple to add more varactors to cover the
> AM BCB. No CAT6 is required. It uses just one turn.
> Multiple turns are unnecessary.
>
> This is a proven design; why reinvent the wheel?
>
> Rick N6RK
>
> On 9/6/2015 4:38 PM, Steve Frost sfrost6572@... [loopantennas] wrote:
>> I have built some very similar...10 foot diameter octagonal loop (6
>> turns spiral wound) and varactor tuned. It was made for the AM
>> broadcast band. It works great but when the varactors are tuned
>> precisely on a station, the antenna re radiates some of the signal and
>> it is picked up by the cat5 cable that supplies the varactors. The
>> result is that the antenna detunes in accordance with the received
>> signal and the sound is raspy. I have to tune the antenna slightly off
>> resonance and this clears up. Soooo the advice I would give you us to
>> use shielded cat 6 for supplying the varactors.

11131. Re: [loopantennas] Wellbrook ALA-1530 vs Pixel RF PRO-1A

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-08 11:33:55 UTC
From: Jack Smith
Topic: 11110 Message: 11131

A 1 meter diameter loop is a very efficient FM broadcast band antenna. It's entirely possible that the FM signals saturated the input stage of the loop amplifier, although this normally evidenced by intermodulation products seen in the 0-30 MHz range rather than loss of sensitivity.

The Pixel Pro-1 amplifier I designed includes an FM broadcast reject filter for this reason. Likewise, my Z1501F active voltage probe antenna includes input FM band filtering.

You must have lived around the Southfield / Detroit border.

Jack K8ZOA

On 9/6/2015 6:47 PM, 'Fredric J. Einstein' feinstei1@...
[loopantennas] wrote:
>
> I purchased a Wellbrook ALA-1530 about 10 years ago when I was living
> in the Detroit area and found it unfortunately to be totally deaf. I
> also had a Cushcraft vertical antenna which worked wonderfully for
> both SWL'ing and ham radio work. The owner of Wellbrook, Mr. Iken
> worked with me (sending me replacement loops and control boxes) and
> eventually refunded the purchase price (although I was "out" the very
> expensive shipping costs back-and-forth to the U.K.) when the problems
> with the antenna in my particular location couldn't be solved. My
> location may have been the problem. I lived about a city block away
> from 5 very powerful FM broadcast towers in one of the near-northern
> suburbs of Detroit. My vertical, even in the close proximity to these
> FM stations, was always able to perform very well on all bands from
> AM broadcast to 10 meters, but the Wellbrook, as I said, was totally
> deaf in my location. No signal, even on strong local AM stations and
> totally silent on the shortwave bands.
>
> I'm wondering if any of the "loop experts" on this mailing list might
> be able to venture a guess as to why I had such bad luck with the
> Wellbrook, which had wonderful reviews and is obviously a great
> performer in most circumstances. Did the close proximity to the FM
> broadcast stations have anything to do with it?
>
>

11132. re: MFJ 1788 (loopantennas] Digest Number 2622)

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-08 16:44:32 UTC
From: Hue Miller
Topic: 11132 Message: 11132

Loop Antenna News and Information Forum> On 9/6/2015 4:38 PM, Steve Frost
sfrost6572@... [loopantennas] wrote:
>> I have built some very similar...10 foot diameter octagonal loop (6
>> turns spiral wound) and varactor tuned. It was made for the AM
>> broadcast band. It works great but when the varactors are tuned
>> precisely on a station, the antenna re radiates some of the signal and
>> it is picked up by the cat5 cable that supplies the varactors. The
>> result is that the antenna detunes in accordance with the received
>> signal and the sound is raspy. I have to tune the antenna slightly off
>> resonance and this clears up. Soooo the advice I would give you us to
>> use shielded cat 6 for supplying the varactors.

I don't know how your DC control is wired, but it's probably RF bypassed at
both ends, isn't it?
So I wonder how this feedback loop works to detune the loop, unless maybe
the control wiring
is very long? Or is the RF takeoff sharing the same Cat5 ? I have not built
a loop, but I think
I would use twinax or doubled coax for the RF takeoff.

>Re: MFJ 1786 High SWR
>Mon Sep 7, 2015 9:03 am (PDT) . Posted by:
>borjamar
>Try to place it so that the loop's plane is perpendicular to the balcony.
I've got a 1788 indoors and I have had problems with a curtain rail.
73 de Borja, EA2EKH

1788 is the 40meters model, is it not?
Do you know what size cap, and maybe its voltage, they used to lower the
tuning range
to 7 MHz from 10 ?
Also, do you find it actually useful on 7 MHz ?
thanks-
Hue Miller (Newport, Oregon)

11133. Re: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-08 00:46:00 UTC
From: Steve Frost
Topic: 11122 Message: 11133
Attachments: 1 described; binary payloads are missing from this source WARC

Its a pleasure to share what little I know and to learn from others in the group. You wanted an idea on how to tilt the loop, so I will show you what I did. See attached pic.

I had a big C band dish which I removed from the polar mount. In it's place, I fastened a sheet of plywood on the mount where the dish used to be. To this plywood base, I mounted two small dishes, one linear and one circular. Also to this base I mounted my big loop. Now when I power the actuator the two dishes follow the satellite arc and the big loop turns and tilts at the same time.

You might not want to go through all this trouble but you could put up a stationary tilted loop using a C band polar mount...lots of folks give them away just to get rid of them.

I am curious to know if anybody else has ever done this....Regards.....Steve VE9SF

On 9/7/2015 8:22 PM, Phillips phillicom@... [loopantennas] wrote:
> Gentlemen,
> I am blown away by the promptness and expertise of your replies. The design will be modified in accordance with advice received. The loop will now be tapped so that I can set the best conditions for my target frequencies. Having the ability to change the inductance will also make the tuner easier to operate -bonus. I am targeting 200KHz to 1710KHz and am looking for as much DX performance as I can get.
> Advice re crosstalk in cat5/6 cables means that precautions can be taken at the outset instead of spending hours chasing a problem later. It looks like I will be spending some time on shielding and isolating.
> I would love to make the loop tilt. In the corner of my mind is a screw jack and occy strap concoction that might, one day, do the job. Maybe I should look closer at what techniques back yard astronomers use to position their telescopes.
> Now that what passes for winter here is over (well almost) I will brave the outside world and start construction today.
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> Thank you heaps for your input. I will put your posts into a special folder and use them as a reference volume.
>
> COLEMAK The keyboard layout for rational thinkersAvailable for Windows, Mac, Linux & AndroidTraining at http://thetypingcat.com/course/colemak
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11134. Re: [loopantennas] Any obvious errors in this loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-09 14:11:25 UTC
From: rbrucecarter@...
Topic: 11122 Message: 11134

Looks like it might be too many turns for the AM band with a 9.6 to 365 pf tuning capacitor

11135. re: MFJ 1788 (loopantennas] Digest Number 2622)

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-11 09:41:35 UTC
From: borjamar@...
Topic: 11132 Message: 11135

---In loopantennas@yahoogroups.com, <kargo_cult@...> wrote :

1788 is the 40meters model, is it not?
Do you know what size cap, and maybe its voltage, they used to lower the
tuning range
to 7 MHz from 10 ?
Also, do you find it actually useful on 7 MHz ?

Hi,

Sorry for the belated answer. I don't know the capacitor size, I just got the antenna last week.

Regarding usefulness, I haven't tried on 7 MHz yet. It was challenging to tune because of my poor environment.

If the propagation allows I will try this weekend and let you know the result. But remember that my antenna is indoors, at the first floor and surrounded by buildings. I am only operating JT digital modes.

Borja - EA2EKH

11136. Auto tuning Magnetic Loop design using two stepper motors

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-13 17:32:52 UTC
From: tim.forrester@...
Topic: 11136 Message: 11136

Just thought you guys would like to take a look at this video of my mag loop tuner based on the TF3LJ power meter design but with extra HW and firmware to make it tune anywhere from 3.7MHz to 14.5MHz and achieve a VSWR of 1.05 (yes I do mean 1.05) in a matter of seconds.

The design will be published by the RSGB shortly.

73 Tim G4WIM / KT6UK

PS I've recently been told the name MagLoop is trade marked - so just for the avoidance of confusion this design has nothing to do with MagLoop

MKII Mag loop- improved input match with rotatable input coupling loop
https://www.youtube.com/watch?v=lMzEijSj6G0&feature=youtu.be

https://www.youtube.com/watch?v=lMzEijSj6G0&feature=youtu.be

MKII Mag loop- improved input match with rotatable i...
https://www.youtube.com/watch?v=lMzEijSj6G0&feature=youtu.be This video shows how I've adapted the original mag loop design to include a second stepper motor / lead screw which positions the input loop for optimum mat...

View on www.youtube.com https://www.youtube.com/watch?v=lMzEijSj6G0&feature=youtu.be
Preview by Yahoo

11137. Re: Auto tuning Magnetic Loop design using two stepper motors

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-14 12:18:37 UTC
From: tenorman1952@...
Topic: 11136 Message: 11137

BRAVO!!!!

73,
Paul - AE5JU

11138. Which design is best and why?

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-09-17 16:22:29 UTC
From: n3ikq@...
Topic: 11138 Message: 11138
Attachments: 3 described; binary payloads are missing from this source WARC

I'm puzzling over the best design for a remotely tuned, large Stormwise ferrite loopstick. I have built a "regular" sized version with a common balanced FET amp. It works well but I want to supersize the iron. Which design is best and why? I am especially curious about the advantages/disadvantages of feeding the tank circuit directly into a very high impedance FET input as opposed using a separate winding. to If using a separate winding, can you recommend a build-able amp that would be a good match for both the input impedance and a 50 ohm output. Or perhaps details on winding a passive matching xfrmer. What type torroid, how many turns etc. I'm a not so great original rf designer but I'm really good at reproducing successful designs and learning from them!

11142. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-01 13:22:34 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11142

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11143. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-01 13:22:34 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11143

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11144. Re: [loopantennas] File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-01 14:22:59 UTC
From: clement F59465
Topic: 5136 Message: 11144

Thank you !

Very nice

73'
F59465 Clement

2015-10-01 15:22 GMT+02:00 <loopantennas@yahoogroups.com>:

>
> Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
> http://www.ccrane.com/antennas/am-antennas/
>
> JLKolb’s antenna links including the KRS AA-1 Active Antenna schematic,
> antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
> http://jlkolb.cts.com/site/ant.htm
>
> Directional Terminated MW/LW Loop by WellBroook (UK)
> K9AY is the Remote Controlled Variable Termination; Provides a Cardioid
> Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
> http://www.wellbrook.uk.com/K9AY.html
>
> Kiwa - High Performance MW Air-Core Loop Antenna
> High Performance MW Air-Core Loop Antenna by KIWA
> http://www.kiwa.com/kiwaloop.html
>
> Palomar Engineers Loop Antennas LW-MW-SW2
> Palomar's Loop Antenna gives superb performance on the AM medium-wave
> broadcast band. The loop rotates and tilts to give deep nulls so you can
> eliminate local interference. It also allows you to null out a station and
> listen to another one on the same frequency.
> http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html
>
> The Quantum loop antennas, now V2.0
> http://www.dxtools.com/
>
> Terk AM loop at Amazon.com
> Here is a place you can buy yourself a TERK AM loop antenna, even some
> other stuff that is kind of off topic to talk about. 73
>
> http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8
712984-4397719
>
> WL1030 by the late Maartenhagg. Plans placed on this website by his
> friends in his honor.
> http://wl1030.com/content/

>
> C Crane Company
> They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
> http://www.ccrane.com
>
> Kiwa Electronics
> Kwia makes the best products for you and your radio equipment, and also
> improves things that needed improvement a long time ago.
> http://www.kiwa.com
>
> Stormwise Ferrite Rods
> Get some huge ferrite rods and a converter to go along with its, heck it
> even comes with project book.
> http://www.stormwise.com
>
> Universal Radio Company
> They sell all sorts of loops big and small for LW/MW/SW and VLF also 10
> kHz to 15 MHz
> http://www.rffun.com
>
>
> ALA-1530
> Find the best UK LF/MF antenna here.
> http://www.wellbrook.uk.com/
>
> AOR
> This is the site that sells the AOR loop
> http://www.aorja.com/ant-e.html
>
> Kiwa Electronics
> The maker of the air core loop antenna and other useful items that you may
> want on your wish list.
> http://www.kiwa.com
>
> LF Engineering Company
> A group of engineers, who make products for VLF/LF listening even ELF
> loops!
> http://www.lfengineering.com
>
> Select A Tenna by Intensitronics Corp
> The maker of the select A tenna, a great AM loop antenna that is a little
> bigger than the terk
> discontinued
>
> Terk Technolegies
> The maker of the best sold AM and I use also called the AM-1000 AM loop
> antenna, there is also technical information on how it works.
> http://www.terk.com
>
> Torus Tuner Loop Company

> A very specially made loop that is almost as big as a hula hoop
> discontinued
>
>
> GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception
> Contributed by radiohighfreq
> Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas.
> Translated from the Gremany Language Webpages here is the "Grahn
> Specialized Loop Antennas for MW and SW Reception" ULR Address:
> http://www.grahn-spezialantennen.de/
> Use the Google Translate a web Page Tool
> http://www.google.com/language_tools to convert these webpages to English.
> http://makeashorterlink.com/?Z5F025FE4
>
>
> When considering AM Loop Antennas . . .
> - - - It all comes down to Time? & Money?
>
> How much Time? Are you going to be 'using' the Loop Antenna for
> DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio
> Loop).
>
> How Much Money? Are you willing to spend for a Loop Antenna to get
> the kind of better reception you want.
>
> TBL: Time and Money translates to the AM Loop Antenna's Value to You.
>
>
> The average radio listener (97%), who wants better AM Radio
> Reception, can spend $100 or less and get an AM Loop Antenna that
> meets their needs.
>
> Here is a brief list of the more common AM Loop Antennas for $100 or
> less.
>
> * Twin Coil Ferrite AM Loop Antenna (Active)
> - - - http://www.ccrane.com/antennas/am-antennas/
>
> * Torus Tuner 27" Loop Antenna (Passive)
> - - - discontinued
>
> * Select-A-Tenna Model #541M (Passive)
> - - - discontinued
>
> * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.terk.com/pdfs/Advantage.pdf
>
> * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)
>

> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html
> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> #1. * Justice AM Loop Antenna (Active)
> > - - - discontinued
> >
>
> #2. * Torus Tuner 27" Loop Antenna (Passive)
> > - - - website gone
> >
>
> #3. * Select-A-Tenna Model #541M (Passive)
> > - - - website gone
> >
>
> #4. * Terk AM Advantage Loop Antenna (Passive)
> > - - - http://www.ccrane.com/antennas/am-antennas/
> >
>
> #5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> > - - - Discontinued (Find 'used' on eBay)
>
>
> >
> > * MTM Scientific AM Radio Loop Antenna (Passive)
> > * http://www.mtmscientific.com/loop.html
> > - - - Starter Kit, Deluxe Kit or Finished Antenna!
> >
> > * * * Home made 'Box' AM Loop Antennas
> > - Usually 20" to 24" in size
> > - - Generally a simple Passive antenna
> > - - - Can be made Active with an add-on amplifier
> >
> >
> > NOTE: Beyond $100 in the $200 to $400 range are the
> >
>
> #1.a. Kiwa MW Air Loop Antenna
>
> #1.b. Quantum Loop Antennas
>
> . . . #3. Palomar Loop Antenna
>

>
> Basic Wire Back Yard Loop Antennas
> Full-wave loops are very popular antennas. They are especially useful on
> 80 and 40 meters where they perform well at modest heights. These are
> closed loops that are one full wavelength long. Horizontal loops may be fed
> at any convenient spot. For best performance, make your horizontal loop
> into a square, especially if it is to be used on several bands.
> http://www.radioworks.com/nloop.html
>
> K9AY: How to Build the K9AY Loop Receiving Antenna
> AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave
> Frequency DXing.
> http://www.aytechnologies.com/Products/products.htm
>
> Six Foot Square by Six Turn Loop Antenna
> New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced
> Amplifier: Frequency Range 50KHz - 5000KHz.
> http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm
>
> Ten Foot Receiveing Loop for Low-Frequency DXing
> A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was
> originally designed and constructed for NDB DXing and now is used for
> LOWFER DX work.
> http://members.shaw.ca/ve7sl/loop.html
>
>
> Dave's HomeMade Loop Antennas
> This is the loop antenna my dad built in 1958. Although I was only 8 years
> old at the time, I knew what this was for and how it worked. WebSite/Pages
> produced by Dave Schmarder Page Contributed by radiohighfreq
> http://www.schmarder.com/radios/misc-stuff/loops.htm
>
> 4 Foot Box loop antenna
> Heres a 4 foot loop project by Bruce
> http://www.mindspring.com/~brucec/loop2.htm
>
> ATL-3 Loop Antenna by Graham Maynard (UK)
> Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26"
> Sided Spiral
> http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm
>
> Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
> The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden
> Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of
> Hooppy-Looppy-Dom presented by RadioIntel.Com.
> http://www.radiointel.com/anthooploop.htm
>
> DXers Tool Box - DIY - Tuned Loop Antenna
> The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you
> vastly improve your Medium Wave reception? The antenna consists of an LC

> (tuning) circuit formed by the air-core loop and a tuning capacitor.
> http://www.geocities.com/SunsetStrip/Underground/8585/loop.html
>
> Embrodary Loops
> While these loop are for crafts, they can be a craft of art for improved
> AM radio reception!
> http://www.craftking.com/crafthtml/embroidery_loops.htm
>
> Hard Core DXing
> Here's what nordic dx has to offer in their discription of loops in this
> website
> http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html
>
> K5DKZ - Three Foot Box Loop Antenna Kit
> Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
> http://www.k5dkz.com/4loop1.html
>
> KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
> KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by
> MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for
> Building this AM/MW Radio DX Loop Antenna.
> http://www.mtmscientific.com/loop.html
>
> Long LoopStick Antenna for MW DXing
> Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna"
> was an experiment to try to improve AM radio reception without using a long
> wire or ground.
> http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm
>
> TL Loop Receiving Antenna 10 KHz - 30 MHz
> The principle of operation is that an rf voltage appears across the
> terminals of a loop when it is placed in an electromagnetic field. The
> voltage is proportional to frequency for a given field strength and so at
> Very Low Frequencies the voltage is very small and requires greater
> amplification but it is not quite as simple as that. The new TL Loop uses a
> unique feedback system to optimise the amplification/noise factor over a
> much wider range than has been possible hitherto.
> http://ecforster.netfirms.com/LpAnt/Doc1.html
>
>
> W2BRI Xmit Loops Contributed by n3hkn
> Ham Radio xmitting loops. Detailed plans and reports from Hams
> experiences. Typical cost is $50 for pipe, capacitor, motor.
> http://www.standpipe.com/w2bri/index.htm
>
> "AM Loop Antenna Calculator" - by Bruce Carter
> Here is a Great Tool for those Loop Antenna => "What Ifs...."
> http://www.mindspring.com/~loop_antenna/amloop_calc4.htm
>
> "Loop Antennas 101" Read This First

> Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It
> All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna
> - What is a Loop and Why Use It - Construction Principles - What Can I Use
> a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop
> Links
> http://www.frontiernet.net/~jadale/Loop.htm
>
> * NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
> Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular
> Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
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>
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> Loops and Rods =&= The Ferrite Rod Antenna
> Theory / Formulas / Drawings = The use of a small Magnetic Loop as an
> antenna. The ferrite has the effect of intensifying the magnetic field
> inside the loop.
> http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html
>
> Modify the common AM Radio Loop Antenna
> Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix
> External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it -
> Add an Amplifier. Presented by Bruce Carter
> http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html
>
> Sensitivity of Multi Turn Receiving Loops
> LWCA - Multi turn wire loops are often used as low frequency receiving
> antennas. Basic electromagnetic theory is developed here as it relates to
> electrically small multi-turn loops at low frequencies. - Presented by
> William E. Payne, N4YWK
> http://www.vlf.it/octoloop/rlt-n4ywk.htm
>
> Using the Small Loop Antenna by Joe Carr
> DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document
> provided by Universal-Radio.Com
> http://www.dxing.com/tnotes/tnote09.pdf
>
>
> How to Get Better AM Radio Reception
> Features Loop Antennas and much more. The Antenna is 90% of Your Radio.
> Still Need More Signal? Try a Better Antenna.
> http://geocities.com/SunsetStrip/Towers/3332/amradio.html
>
> Introduction to Broadcast Band AM/BCB/MW DXing
> The International Radio Club of America (IRCA) WebPages
> http://www.geocities.com/Heartland/5792/bcbdx.htm
>

>
> ** Radio-Antenna-PRO ** H.Hertz-Forum
> Remember you may need some Russian Text software for this groupThe
> international forum for radioengineers, scientists and hams. All about
> radioelectronics, radiocommunications, radiophysics, electrodynamics. About
> 250 members from 20 countries. In Russian language. Very active. Lot of
> interesting researches and discussions.
> http://groups.yahoo.com/group/Hz/
>
>
> Radio DXing with The Interference Problem
> This is great for that annoying problem you have with your loop antenna,
> and you may think its the loop, think again it could be that messed up
> street light, next doors dimmer switch, and other something else you can't
> probably solve with just a loop antenna.
> http://groups.yahoo.com/group/RadioDx/
>
>
> "3805er" 80-Meter balanced coax loop
> Small shielded rx only loop for 80 meters
>
> http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm
>
> Magnetic Loop Antennas Receiving - by W8JI
> This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields -
> Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
> http://www.w8ji.com/magnetic_receiving_loops.htm
>
> Radiation and Fields (Magnetic Loop Antennas) - by W8JI
> This WebPage's Topic Are: - Electric Field - Magnetic Field -
> ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel
> Zone - Farfield - Summary - by W8JI
> http://www.w8ji.com/radiation_and_fields.htm
>
> Shielded-Loop Receiving Antenna by N5FC
> Shielded-Loop antennas have some nice properties that make them desirable
> as portable receiving antennas.
> http://www.io.com/~n5fc/loop_ant.html
>
> Antique Electronic Supply
> A sorts of older variable tuning capacitors for your loop antenna that
> needs one bad.
> http://www.tubesandmore.com
>
> Fair Radio Sales
> A wide variety of electronic components, radios, and variable capacitors
> for your loop antenna
> http://www.fairradio.com/
>
> Ocean State Electronics

> Rhode Island's best selection for a wide variety of the best tuning
> capacitors for reasonable price, tell them that electronicdx (Adam Ebel)
> sent you.
> http://www.oselectronics.com/ose_p96.htm
>
> The Crystal Set Society
> Here are some capacitor available from a club that devotes to Crystal Set
> Radio
> http://www.midnightscience.com/catalog5.html
>
> The Surplus Sales of Nebraska
> This surplus store based in the state of Nebraska, has the one you might
> need, but they have minumim order policy
> http://www.surplussales.com/Variables/AirVariables/AirVar1.html
>
>
> Dan Small Parts and Kits
> Dan's wide selection from Canada.
> http://www.danssmallpartsandkits.net/
>
>
> American Science and Surplus
> A big spool of wire here just about for AM
> http://www.sciplus.com/category.cfm?subsection=15&category=150
>
> DigiKey.com
> For ribbon cable and other sorts of wire.
> http://www.digikey.com
>
> Femco Magnet Wire
> Femco Magnet Wire is a joint venture company that has been supplying round
> insulated copper magnet (winding) wire to the transplant market since 1988.
> http://www.femcomagnetwire.com/
>
> Litz-Wire,com
> Welcome to Litz-Wire.com!
> http://www.litz-wire.com/
>
> MCM electronics
> They do sell wire and magnet wire here
> http://www.mcmelectronics.com
>
> MWS Industries
> A place for all sorts of wire for business and industry
> http://www.mwswire.com
>
> Magnet Wire from Radio Shack
> This is what I use often
>
> http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F0

10%5F004%5F000&product%5Fid=278%2D1345
>
> Mouser Electronics
> Mouser has the biggest spools here for a great price, that makes sense
> http://www.mouser.com
>
> Ocean State Electronics
> magnet wire at a good price
> http://www.oselectronics.com
>
> WIRE "Flex-Weave" Antenna Wire
> "Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven
> #36 solid copper wires that provide high strength and extreme flexibility.
> The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG
> wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft
> in areas with high ice and wind loading).
> http://www.radio-ware.com/products/fw.htm
>
> WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong,
> Flexible and Durable
> "QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has
> more than 41 Strands tightly twisted together under its Flexible Insulation
> making it both Strong, Flexible and Durable.
> http://www.antennasmore.com/wire&.htm
>
> Scanning, Ham Radio and Public Safety Resources
> - Links to the various webpages with resources for the Ham Radio Operator
> and Scanning Enthusiast. Resources such as; Monitoring Police and Fire
> Communications, What Antennas to use, Secret Scanner Frequencies, Radio
> Programming Software, Radio Mods and Operating Tips, Professional resources
> for Public Safety Management, Guidance and Self-Help.
> http://myweb.accessus.net/~090/resources-ps.html
>
> Amidon Ferrite rods, bars, plates, and tubes.
> https://www.amidoncorp.com/
>
> Bytemark Ferrite rods, bars, plates, and tubes.
> http://www.bytemark.com/products/rod1.htm
>
>
>
> ------------------------------------
>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the
> Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files

>
> You can now view images at higher resolution in Photos. Upload JPG and GIF
> into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!
> ------------------------------------
>
> Yahoo Groups Links
>
>
>
>

--

73'
Cordialement
F59465 Clement

My channel: F59465swl Youtube <http://www.youtube.com/F59465swl>

11146. Re: Fw: important

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-01 17:55:59 UTC
From: rbrucecarter@...
Topic: 11139 Message: 11146

Tracey - is it possible you got hacked?

As a reminder to all my fellow group members - it is extremely dangerous to follow a link to an unknown website. Doing so may infect your computer with malware. Although I have heard of no cases where malware has been transmitted through Yahoo groups - this could well be a hacker gaining control of Tracey's account. Don't follow the link!

11147. Re: Fw: important

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-01 18:11:07 UTC
From: gnuarm.2007@...
Topic: 11139 Message: 11147

This is a Yahoo group which operates as a mailing list. No one needs to be hacked or virus infected. Any email that is sent to the list with a return address matching one of the users will be posted to the group. Spoofing the return address is very easy. That is one of the weaknesses that we are exposed to with a mailing list like this. Anyone with a valid email address can post anything they wish.

Rick

11148. video from Mike just received

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-02 02:04:11 UTC
From: sjdeines@...
Topic: 11148 Message: 11148

Part- 2 Preparing For Hurricane Joaquin With The Alpha Magnetic Coaxial Loop Antenna 10- 1-2015 https://www.youtube.com/watch?v=JwtFXEYS-7M

https://www.youtube.com/watch?v=JwtFXEYS-7M

Part- 2 Preparing For Hurricane Joaquin With The...
https://www.youtube.com/watch?v=JwtFXEYS-7M UPDATE: Hurricane Joaquin is now a category 4 hurricane with winds at 130mph heading towards the east coast of the united states. In this video I test t...

View on www.youtube.com https://www.youtube.com/watch?v=JwtFXEYS-7M
Preview by Yahoo

Steve/N0TES

11149. For Sale a MW and LW 1 Meter loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-05 21:05:30 UTC
From: everettsharp@...
Topic: 11149 Message: 11149

I have two 1 Meter Loop Antennas for sale, one covers the MW band and the other covers the LW band. I am asking $200 for the MW loop and $225 for the LW loop. I do not want to ship them so they are only available for pick up at my QTH, which is Tuscaloosa, AL. They are one of a kind and very professionally built.

There is an article in the files section, "The Twin Hex Loop Antennas" that has pictures and info on the two loops. If there is interest please contact me off list at everettsharp (at) aol.

Everett N8CNP

11150. HF - NEW Loop construction

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-10 16:07:54 UTC
From: m6pdc@...
Topic: 11150 Message: 11150
Attachments: 2 described; binary payloads are missing from this source WARC

Hi Folks, I'm a newby novice looking for some ideas for a new HF Mag Loop. I've built up a timber frame to support a loop with a diameter of 1200mm. enclosed attachment Exel calculations and the type of capacitor that will be used.

I'm unsure to which diameter pipe to use the calculations are for 19mm but would like to know from any of you that have been building loops for HF RX/TX which you found to be the best?

I was thinking about contacting someone local who does steel fabrications to see if i could have solid 20mm copper rod curved to a perfect circle with the meeting gap at the top which ends of the rod would be made flat to make straps for either air spaced capacitor or vacuum cap.

would having solid rod all the way through gain me much,? there are losses when using copper pipe if I was to choose an oct or hex design, losses at each joint.

Advise Advise Advise please from any of you PRO builders.. would be very grateful

11151. Re: [loopantennas] HF - NEW Loop construction

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-10 23:43:50 UTC
From: Will
Topic: 11150 Message: 11151

Hi,

Solid copper is total waste.

Skin effect means that only the outer conducts. Hence only tube needed
and even it walls probably thicker than conductive depth.

The excess weight and COST is not needed, see above for reason.

Cheers,
Will

On 11/10/15 05:07, m6pdc@... [loopantennas] wrote:
>
>
> Hi Folks, I'm a newby novice looking for some ideas for a new HF Mag
> Loop. I've built up a timber frame to support a loop with a diameter
> of 1200mm. enclosed attachment Exel calculations and the type of
> capacitor that will be used.
>
>
> I'm unsure to which diameter pipe to use the calculations are for 19mm
> but would like to know from any of you that have been building loops
> for HF RX/TX which you found to be the best?
>
>
> I was thinking about contacting someone local who does steel
> fabrications to see if i could have solid 20mm copper rod curved to a
> perfect circle with the meeting gap at the top which ends of the rod
> would be made flat to make straps for either air spaced capacitor or
> vacuum cap.
>
>
> would having solid rod all the way through gain me much,? there are
> losses when using copper pipe if I was to choose an oct or hex design,
> losses at each joint.
>
>
> Advise Advise Advise please from any of you PRO builders.. would be
> very grateful
>
>
>
>
>

11152. Re: HF - NEW Loop construction

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-16 08:36:05 UTC
From: leo1949uk@...
Topic: 11150 Message: 11152

Magnetic Loop Antennas https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages

https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages

Magnetic Loop Antennas https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages
Magnetic Loop or Small Transmitting Loop antennas are nothing new, however there seems to be an increased interest in these highly misunderstood antennas....

View on groups.yahoo.com
https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages
Preview by Yahoo

Here is a dedicated user group which may suit you....

Better for magnetic loops.

Lee...G6ZSG.

11153. Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-16 10:14:26 UTC
From: leo1949uk@...
Topic: 11153 Message: 11153

Has anyone got any comments.. good or bad on this loop ant ??

I am currently using a 63ft " Lazy L" with 9:1 transformer to feed my Winradio G305i

which works well for 9KHZ to 30Mhz SWL listening but picks up a lot of QRM.

Thanks.

Lee...G6ZSG.

11154. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-16 19:47:01 UTC
From: daiche@...
Topic: 11153 Message: 11154

Hi Lee,

A number of us are going to do TP DX next week along the Oregon cliffs for enhanced reception. Guy Atkins and I will be bringing 1530's along. His will be the new LN Pro version, so there should be a nice report on the IRCA website in a week or two after that. If I can find a spot, I might try phasing 2 1530's for a narrower pattern. You still need 65' to 130' separation to get decent gain, so I may not find enough room for that test.

Dave Aichelman N7NZH Grants Pass, Oregon

11155. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-17 07:57:49 UTC
From: leo1949uk@...
Topic: 11153 Message: 11155

Hi Dave..

Thankyou for replying.. Yes, that would be most useful.

Regards.

Lee...G6ZSG.

11156. Re: For Sale a MW and LW 1 Meter loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 01:59:13 UTC
From: everettsharp@...
Topic: 11149 Message: 11156

The LW loop has been sold, but the MW 1 Meter loop is still for sale along with two other smaller loops,

Everett N8CNP

11157. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 03:58:06 UTC
From: dx@...
Topic: 11153 Message: 11157

Hi Lee,

As my pal Dave mentioned I'll indeed be using the new ALA1530LN Pro antenna next week on our DXing trip (10/23-10/26). I will also have the other Wellbrook antenna in the Imperium line up, the ALA1530S+ Imperium for comparisons.

Based on my prior experience at this location on the Oregon coast https://www.google.com/maps/@45.7437814,-123.9586501,3a,75y,135.83h,78.18t/data=!3m6!1e1!3m4!1sOEZ9zEy1PKc8fvNo9rV_sg!2e0!7i13312!8i6656!6m1!1e1, even compact antennas can experience significant sea gain. The altitude over the Pacific is approximately 450 feet. Pacific NW DXers like to head to these cliffs for the excellent medium wave reception from New Zealand in the summers, and Japan/China/Korea/etc. this time of year. We park at the Highway 101 turnouts a couple hours before dawn, and start recording the band with our SDR receivers.

Wellbrook's 1-m. compact active loops are excellent for these limited space DXing spots. For those willing to bring along some portable masts and bases, you can use Wellbrook ALA100LN or FLG100LN modules for smallish (~10 X 15 ft.) rectangular loops or Flag antennas.

I'll report back with some comments on the antenna performance after the DXpedition. BTW, if you haven't read my ALA1530 review http://www.dxing.info/equipment/ALA1530-vs-RFPRO-1AReview.pdf from a few years back you may want to check it out.

Regards,

Guy KE7MAV
Puyallup, WA

---In loopantennas@yahoogroups.com, <leo1949uk@...> wrote :

Hi Dave..

Thankyou for replying.. Yes, that would be most useful.

Regards.

Lee...G6ZSG.

11158. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 07:29:30 UTC
From: leo1949uk@...
Topic: 11153 Message: 11158

Hi Guy..

Yes I did read your review and found the Wellbrook/Pixel comparison interesting...
I need to compare a "Lazy L" as I have to remove it, courtesy of the local council..

I have a magnetic loop `tho it`s not wide band enough, but may have to resort to using it... the cap is twin gang series coupled but may have to switch to parallel coupling to gain extra R/X bandwidth - much easier to get a Wellbrook !!

I `could` use the Wellbrook pre-amp and re-configure the "Lazy L" back to a EWE or Flag, if the council would allow it (maybe disguise it as a clothes drying line complete with clothes pegs..hi)

My receiver is a Winradio G305i sdr !

Looking forward to your report altho` I live in the West Midlands (Birmingham) not the wind swept cliffs of the coast hi hi...

Regards.

Lee...G6ZSG.

11159. Re: [loopantennas] Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 09:47:58 UTC
From: Andrew Ikin
Topic: 11153 Message: 11159

Hello Lee,

Its worth mentioning that some of Guy’s recordings are on the Wellbrook website, these can be found by clicking on “Audio Samples” at the bottom left hand side of the front page.

Kind regards

Andrew Ikin

G8LUG

From: mailto:loopantennas@yahoogroups.com
Sent: Sunday, October 18, 2015 8:29 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: Wellbrook ALA1530LNPro

Hi Guy..

Yes I did read your review and found the Wellbrook/Pixel comparison interesting...
I need to compare a "Lazy L" as I have to remove it, courtesy of the local council..

I have a magnetic loop `tho it`s not wide band enough, but may have to resort to using it... the cap is twin gang series coupled but may have to switch to parallel coupling to gain extra R/X bandwidth - much easier to get a Wellbrook !!

I `could` use the Wellbrook pre-amp and re-configure the "Lazy L" back to a EWE or Flag, if the council would allow it (maybe disguise it as a clothes drying line complete with clothes pegs..hi)

My receiver is a Winradio G305i sdr !

Looking forward to your report altho` I live in the West Midlands (Birmingham) not the wind swept cliffs of the coast hi hi...

Regards.

Lee...G6ZSG.

11160. Re: [loopantennas] Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 10:49:02 UTC
From: Andrew Ikin
Topic: 11153 Message: 11160

Lee,

Here is the URL for the audio samples.

http://www.wellbrook.uk.com/Audio_Samples

Kind regards

Andrew Ikin

11161. Re: [loopantennas] Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 15:16:06 UTC
From: leo1949uk@...
Topic: 11153 Message: 11161

Thanks Andrew..

Didn`t come across those samples on Wellbrook`s site..can`t listen for those stations on our
crowded medium wave - hopefully the uk will go DRM so we can listen for them.. heard some on shortwave bands ...

Great little receiver the Winradio G305.

Regards.

Lee...G6ZSG.

11162. Re: [loopantennas] Re: HF - NEW Loop construction

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-16 10:31:41 UTC
From: Jonathan Coles
Topic: 11150 Message: 11162

Thanks Lee.

The group page that you linked to indicates that it's necessary to join, but provides no Join button. Please consider adding some instructions to help people join.

For others who are lost, I can tell you that generally you must use the Search Groups function and then click Join Group in the group's description.

Like so many user interfaces these days, Yahoo! Groups is quite baffling. Inconsistent, too. Sometimes it refuses to do something because "You need to be a member to perform this action," even though I'm logged in! And on repeated logins this morning I find that MagLoop sometimes appears in the Groups Home list, but sometimes doesn't. But if I find the group through a search, it then appears in the list again. Still can't read anything. Perhaps I'm awaiting membership approval. Not sure. No membership status is displayed that I can see...

Would emailing magloop-subscribe@yahoogroups.com <mailto:magloop-subscribe@yahoogroups.com> be a simpler way for people to join?

Looking forward to seeing more information about loop antennas.

On 15-10-16 04:36 AM, leo1949uk@... [loopantennas] wrote:
>
> Magnetic Loop Antennas
> <https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages>
>
>
>
>
> image
> <https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages>
>
>
> Magnetic Loop Antennas
> <https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages>
> Magnetic Loop or Small Transmitting Loop antennas are nothing new,
> however there seems to be an increased interest in these highly
> misunderstood antennas....
>
> View on groups.yahoo.com
> <https://groups.yahoo.com/neo/groups/MagLoop/conversations/messages>
>

> Preview by Yahoo
>
> Here is a dedicated user group which may suit you....
>
> Better for magnetic loops.
>
>
> Lee...G6ZSG.
>

11163. Re: HF - NEW Loop construction

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 21:06:18 UTC
From: alienrelics@...
Topic: 11150 Message: 11163

You do realize that fractional loop antennas -are- magnetic loop antennas.

Steve Greenfield AE7HD

11164. Re: [loopantennas] Re: HF - NEW Loop construction

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-18 21:09:23 UTC
From: alienrelics@...
Topic: 11150 Message: 11164

You should be able to see a "Join" button from the Info page.

https://groups.yahoo.com/neo/groups/MagLoop/info
https://groups.yahoo.com/neo/groups/MagLoop/info

Steve Greenfield AE7HD

11165. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-22 07:18:49 UTC
From: leo1949uk@...
Topic: 11153 Message: 11165

Hi Lee,

A number of us are going to do TP DX next week along the Oregon cliffs for enhanced reception. Guy Atkins and I will be bringing 1530's along. His will be the new LN Pro version, so there should be a nice report on the IRCA website in a week or two after that. If I can find a spot, I might try phasing 2 1530's for a narrower pattern. You still need 65' to 130' separation to get decent gain, so I may not find enough room for that test.

Dave Aichelman N7NZH Grants Pass, Oregon

Hi again Dave... Do you have a url for the IRCA Website Please ?
I have Googled and come up with nothing !!

Thankyou.

Lee...G6ZSG.

11166. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-22 18:08:23 UTC
From: dx@...
Topic: 11153 Message: 11166

Hi Lee,

I don't think Dave will mind me jumping in here giving the URL:

http://www.ircaonline.org/index1.html http://www.ircaonline.org/index1.html

Most loggings first appear in the mailing list (emails) from IRCA; you can easily sign up at a link given on the main page at the IRCA site. This is free for anyone to sign up, but you'd have to join the club to receive the weekly (during DX season) PDF bulletins.

73,

Guy Atkins
Puyallup, WA USA

---In loopantennas@yahoogroups.com, <leo1949uk@...> wrote :

Hi again Dave... Do you have a url for the IRCA Website Please ?
I have Googled and come up with nothing !!

Thankyou.

Lee...G6ZSG.

11167. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-22 23:13:39 UTC
From: daiche@...
Topic: 11153 Message: 11167

Thanks Guy for jumping in there!

I didn't know what the URL was and I have been busy getting ready for the Cliffs trip and getting final honey-doo's out of the way. Ha!

Dave Aichelman N7NZH Grants Pass, Oregon

11168. Re: Wellbrook ALA1530LNPro

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-23 08:23:49 UTC
From: leo1949uk@...
Topic: 11153 Message: 11168

Thanks Guy...

Had a quick look through the site.. settled on sign up for e-mail reports.

Regards.

Lee...G6ZSG.

Hi Lee,

I don't think Dave will mind me jumping in here giving the URL:

http://www.ircaonline.org/index1.html http://www.ircaonline.org/index1.html

Most loggings first appear in the mailing list (emails) from IRCA; you can easily sign up at a link given on the main page at the IRCA site. This is free for anyone to sign up, but you'd have to join the club to receive the weekly (during DX season) PDF bulletins.

73,

Guy Atkins
Puyallup, WA USA

11169. Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-25 00:44:01 UTC
From: pmanfre@...
Topic: 11169 Message: 11169

I normally design and build Ultra low noise preamps for EME use, but I was asked about one for HF. I tackled the project and have come up with a design that is below 1dB NF and has a gain of 25dB from 1-150Mhz ... and actually usable from 300khz to 1.5Ghz. I made some extras if someone needs one....they are various types from 16dB gain to the 25dB ones.

If anyone wants a schematic please email me off list and I will send a copy. They are cheap to construct ....$60+/- complete depending on parts supply.

Pete WA2ODO

11170. Re: [loopantennas] Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-25 20:37:55 UTC
From: Richard (Rick) Karlquist
Topic: 11169 Message: 11170

What active device are you using?

Rick N6RK

On 10/24/2015 5:44 PM, pmanfre@... [loopantennas] wrote:
> I normally design and build Ultra low noise preamps for EME use, but I
> was asked about one for HF. I tackled the project and have come up with
> a design that is below 1dB NF and has a gain of 25dB from 1-150Mhz ...
> and actually usable from 300khz to 1.5Ghz. I made some extras if
> someone needs one....they are various types from 16dB gain to the 25dB
> ones.
>
> If anyone wants a schematic please email me off list and I will send a
> copy. They are cheap to construct ....$60+/- complete depending on
> parts supply.
>
> Pete WA2ODO
>
>

11171. Re: [loopantennas] Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-26 16:24:00 UTC
From: 3ym3ym@...
Topic: 11169 Message: 11171

Hi Pete,
The most interesting parameter on HF is the strong signal handling (IP3).
In the loop antenna application, there is also a requirement of very low input impedance, not so much for matching as for realizing the deep null in the antenna system directivity pattern.
In other words, it is not amplifying the weak signal that we worry about on HF, but reducing interference from strong out of band signals or strong in band signals coming from another direction.

73, Mike AF7KR.

11172. Re: Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-26 11:59:06 UTC
From: Pete Manfre
Topic: 11169 Message: 11172

Triquint TQP3M9035 ....although spec'd to go down to 30Mhz will really go to 100khz easily from what I can see. And it appears to be very stable also.

Pete

--

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https://www.avast.com/antivirus

11173. Re: [loopantennas] Re: Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-26 18:37:33 UTC
From: Richard (Rick) Karlquist
Topic: 11169 Message: 11173

On 10/26/2015 4:59 AM, Pete Manfre pmanfre@... [loopantennas] wrote:
> Triquint TQP3M9035 ....although spec'd to go down to 30Mhz will really
> go to 100khz easily from what I can see. And it appears to be very
> stable also.
>
> Pete
>

The data sheet I saw specs it down to 50 MHz. The reason for
choosing this spec is that the device technology is ephemt.
This technology has 1/f noise below that frequency, which
is why they spec it to only 50 MHz, as far as NF is concerned.
The device will "work" all the way down to whatever frequency
limitations are imposed by the user's coupling capacitor and
feed choke, but the low NF only applies above 50 MHz.

More bad news: those nice NXP MOSFET's that work great for
FM BCB and UHF TV tuners also have 1/f noise problems that
make them a poor choice for AM BCB and 160 meter preamps.

If anyone finds an exception to the above, please post it
to the group.

OTOH, there is no 1/f noise issue for JFETs at least down
to the AM BCB. Ditto for BJT's.

Rick N6RK

11174. Re: [loopantennas] Re: Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-26 18:52:02 UTC
From: Everett Sharp
Topic: 11169 Message: 11174

Rick,

Do yo have any good preamp plans you are willing to share with the group using JFETs that will give 30 dB of gain for MW and below?

Everett N8CNP

Sent from my iPad

> On Oct 26, 2015, at 1:37 PM, 'Richard (Rick) Karlquist' richard@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> On 10/26/2015 4:59 AM, Pete Manfre pmanfre@... [loopantennas] wrote:
> > Triquint TQP3M9035 ....although spec'd to go down to 30Mhz will really
> > go to 100khz easily from what I can see. And it appears to be very
> > stable also.
> >
> > Pete
> >
>
> The data sheet I saw specs it down to 50 MHz. The reason for
> choosing this spec is that the device technology is ephemt.
> This technology has 1/f noise below that frequency, which
> is why they spec it to only 50 MHz, as far as NF is concerned.
> The device will "work" all the way down to whatever frequency
> limitations are imposed by the user's coupling capacitor and
> feed choke, but the low NF only applies above 50 MHz.
>
> More bad news: those nice NXP MOSFET's that work great for
> FM BCB and UHF TV tuners also have 1/f noise problems that
> make them a poor choice for AM BCB and 160 meter preamps.
>
> If anyone finds an exception to the above, please post it
> to the group.
>
> OTOH, there is no 1/f noise issue for JFETs at least down
> to the AM BCB. Ditto for BJT's.
>
> Rick N6RK
>

11175. Re: [loopantennas] Re: Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-27 00:05:05 UTC
From: Richard (Rick) Karlquist
Topic: 11169 Message: 11175

On 10/26/2015 11:52 AM, Everett Sharp everettsharp@...
[loopantennas] wrote:
> Rick,
>
> Do yo have any good preamp plans you are willing to share with the group
> using JFETs that will give 30 dB of gain for MW and below?
>
> Everett N8CNP
>

I don't have that, but I can suggest the Hittite (now owned
by Analog Devices) HMC-580:

http://www.analog.com/media/en/technical-documentation/data-sheets/hmc580st89.pdf

It comes in a package that dissipates heat well and is
breadboardable with a soldering iron and wire solder.

I made up a PC board for it and have some extra PCB's that I
will sell for $10 plus mailing (allow $2.00 in the USA).
The PCB has provisions for sending DC over the coax to
power the amp.

The low frequency response of this amp will be limited by
the DC feed inductor. I have been using it for 160 meters,
so you may need to change the feed inductor to go to MW and
below.

An interesting idea you could explore would be to make
a push pull amplifier using two HMC380's. The output
transformer would replace the feed choke for purposes
of DC feed. It should make a big improvement in 2nd
order intermod, of course. You need to make sure that
the transformers don't themselves have intermod that exceeds
what the amplifier produces. Therefore, you should make
transformers with "binocular" cores, as popularized by
W8JI (see his web site for info). BTW, you also need
to worry about intermod in the DC feed choke when using
a single HMC580. Do not use an closed core (IE no air
gap). This rules out the binocular core to build a
DC feed choke for a single amplifier.

Rick N6RK

11176. Re: [loopantennas] Re: Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-27 00:25:12 UTC
From: Everett Sharp
Topic: 11169 Message: 11176

Rick,
Is the MMIC device that mention below stable? I have played with some MMIC devices that tend to go into oscillation.

Everett

Sent from my iPad

> On Oct 26, 2015, at 7:05 PM, 'Richard (Rick) Karlquist' richard@karlquist.com [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> On 10/26/2015 11:52 AM, Everett Sharp everettsharp@...
> [loopantennas] wrote:
> > Rick,
> >
> > Do yo have any good preamp plans you are willing to share with the group
> > using JFETs that will give 30 dB of gain for MW and below?
> >
> > Everett N8CNP
> >
>
> I don't have that, but I can suggest the Hittite (now owned
> by Analog Devices) HMC-580:
>
> http://www.analog.com/media/en/technical-documentation/data-sheets/hmc580st89.pdf
>
> It comes in a package that dissipates heat well and is
> breadboardable with a soldering iron and wire solder.
>
> I made up a PC board for it and have some extra PCB's that I
> will sell for $10 plus mailing (allow $2.00 in the USA).
> The PCB has provisions for sending DC over the coax to
> power the amp.
>
> The low frequency response of this amp will be limited by
> the DC feed inductor. I have been using it for 160 meters,
> so you may need to change the feed inductor to go to MW and
> below.
>
> An interesting idea you could explore would be to make
> a push pull amplifier using two HMC380's. The output
> transformer would replace the feed choke for purposes
> of DC feed. It should make a big improvement in 2nd
> order intermod, of course. You need to make sure that
> the transformers don't themselves have intermod that exceeds
> what the amplifier produces. Therefore, you should make

> transformers with "binocular" cores, as popularized by
> W8JI (see his web site for info). BTW, you also need
> to worry about intermod in the DC feed choke when using
> a single HMC580. Do not use an closed core (IE no air
> gap). This rules out the binocular core to build a
> DC feed choke for a single amplifier.
>
> Rick N6RK
>

11177. Re: [loopantennas] Re: Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-27 02:07:45 UTC
From: Richard (Rick) Karlquist
Topic: 11169 Message: 11177

On 10/26/2015 5:25 PM, Everett Sharp everettsharp@... [loopantennas]
wrote:
> Rick,
> Is the MMIC device that mention below stable? I have played with some
> MMIC devices that tend to go into oscillation.
>
> Everett
>

I have seen the same problem in other MMIC's. Some MMIC's are
very sensitive to an inductance in the ground lead, or resonances
caused by the PC board. This device has only 1 GHz bandwidth and
has a ground paddle allowing very low inductance to ground. If you're
really concerned, use the evaluation board from the vendor. It is a
bulletproof microwave quality board. My homebrew board is just for
HF and is nothing special.

In any event, I have never run into any oscillation problems with
the HMC580.

73
Rick N6RK

11178. Re: [loopantennas] Re: Preamps ...

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-27 02:09:29 UTC
From: Everett Sharp
Topic: 11169 Message: 11178

Thanks Rick,

Everett

Sent from my iPad

> On Oct 26, 2015, at 9:07 PM, 'Richard (Rick) Karlquist' richard@... [loopantennas]
<loopantennas@yahoogroups.com> wrote:
>
>
>
> On 10/26/2015 5:25 PM, Everett Sharp everettsharp@... [loopantennas]
> wrote:
> > Rick,
> > Is the MMIC device that mention below stable? I have played with some
> > MMIC devices that tend to go into oscillation.
> >
> > Everett
> >
>
> I have seen the same problem in other MMIC's. Some MMIC's are
> very sensitive to an inductance in the ground lead, or resonances
> caused by the PC board. This device has only 1 GHz bandwidth and
> has a ground paddle allowing very low inductance to ground. If you're
> really concerned, use the evaluation board from the vendor. It is a
> bulletproof microwave quality board. My homebrew board is just for
> HF and is nothing special.
>
> In any event, I have never run into any oscillation problems with
> the HMC580.
>
> 73
> Rick N6RK
>

11179. Video Comparison of Wellbrook ALA1530LN Pro and ALA1530S+ Imperium Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-28 07:29:19 UTC
From: dx@...
Topic: 11179 Message: 11179

This past weekend I found some interesting results from medium wave DXing with both models of Wellbrook Imperium loop antennas at the "fabled" Rockworks cliffs near Manzanita, Oregon USA. This location has become popular the last few years with Oregon, Washington, and British Columbia DXers due to the signal enhancement at this narrow strip of land approx. 150 meters above the Pacific ocean. The main benefit seems to be splatter reduction of "pest" stations due to the signal blockage of the rock walls blasted into the cliffs for the coastal highway 101. However, a boost of signals around local sunrise is also beneficial, and is a common occurrence near salt water beaches.

Because of the limited space along this scenic coastal highway, all antennas used for DXing need to be both compact and temporary. Wellbrook loops supported on pro-audio speaker stands are a great way to go, and can easily be set up in the pre-dawn darkness.

Please read the description as well as see the video at this YouTube link:

Wellbrook 1530LNPro vs ALA1530S+ Imperium Loop Antennas
https://www.youtube.com/watch?v=rbX_G0ll_kk

https://www.youtube.com/watch?v=rbX_G0ll_kk

Wellbrook 1530LNPro vs ALA1530S+ Imperium Loo...
https://www.youtube.com/watch?v=rbX_G0ll_kk This is a comparison file of weak signal reception with the two models of Wellbrook Communications "Imperium" series loop antennas: the ALA1530LN "...

View on www.youtube.com https://www.youtube.com/watch?v=rbX_G0ll_kk
Preview by Yahoo

Best DX,

Guy Atkins
Puyallup, WA USA
DXing at Rockworks cliffs near Manzanita, OR
Elad FDM-S2
Wellbrook ALA1530LN Pro & ALA1530S+ Imperium loops

11180. Re: Video Comparison of Wellbrook ALA1530LN Pro and ALA1530S+ Imperium Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-28 08:16:08 UTC
From: leo1949uk@...
Topic: 11179 Message: 11180

Looking good Guy... be interesting to see how they compare to a typical noisy, long wire (63ft ex Lazy "L")
with 9:1 impedance transformer and MFJ 1045C RF Preselector for low S/N performance :o)

Regards.

Winradio G305i.
Yaesu FT817ND.

Lee...G6ZSG.
---

thinkdx
Today at 7:29 AM

This past weekend I found some interesting results from medium wave DXing with both models of Wellbrook Imperium loop antennas at the "fabled" Rockworks cliffs near Manzanita, Oregon USA. This location has become popular the last few years with Oregon, Washington, and British Columbia DXers due to the signal enhancement at this narrow strip of land approx. 150 meters above the Pacific ocean. The main benefit seems to be splatter reduction of "pest" stations due to the signal blockage of the rock walls blasted into the cliffs for the coastal highway 101. However, a boost of signals around local sunrise is also beneficial, and is a common occurrence near salt water beaches.

Because of the limited space along this scenic coastal highway, all antennas used for DXing need to be both compact and temporary. Wellbrook loops supported on pro-audio speaker stands are a great way to go, and can easily be set up in the pre-dawn darkness.

11181. Re: Video Comparison of Wellbrook ALA1530LN Pro and ALA1530S+ Imperium Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-28 17:34:31 UTC
From: 3ym3ym@...
Topic: 11179 Message: 11181

Long wire collects more signal, and may even have better S/N. But it doesn't have the deep null of the loop, so the "Signal to interfering signal" ratio is typically much worse. This is very important for AM DXing.

73, Mike

11182. Re: Video Comparison of Wellbrook ALA1530LN Pro and ALA1530S+ Imperium Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-29 08:54:42 UTC
From: leo1949uk@...
Topic: 11179 Message: 11182

Thanks mike...

Regards.

Lee...G6ZSG.

11183. Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-30 12:30:46 UTC
From: leo1949uk@...
Topic: 11183 Message: 11183

I have ordered the Wellbrook ALA1530LNPro and expect it to arrive Wednesday hopefully...??
What is the best height to mount it ??1 metre magloops are reckoned to be best at one loop width high... as this Wellbrook ALA1530LNPro is mentioned in passing, as a magloop, does this mean at 1 metre off the ground too ??
My vertical homebrew 1 metre magloop works well at 1 metre height !!

Regards.

Lee G6ZSG.

11184. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-10-31 20:04:28 UTC
From: dx@...
Topic: 11183 Message: 11184

Hello Lee,

the Wellbrook compact loops are very flexible when it comes to mounting height. Even folks who have place it right at ground level (due to severe siting restrictions or just temporary use) report surprisingly good results.

Andrew at Wellbrook has told me that 1-1/2 to 2 meters is perfectly satisfactory. I have only heard of infrequent issues when mounting these loops extremely high... above 5 meters for example. In a very high signal urban area, excess height could contribute to overloading (which is a rare occurrence with any Wellbrook product).

Hopefully Andrew will respond and give us some additional thoughts on height above ground.

73,

Guy Atkins KE7MAV
Puyallup, WA USA

---In loopantennas@yahoogroups.com, <leo1949uk@...> wrote :

I have ordered the Wellbrook ALA1530LNPro and expect it to arrive Wednesday hopefully...??
What is the best height to mount it ??1 metre magloops are reckoned to be best at one loop width high... as this Wellbrook ALA1530LNPro is mentioned in passing, as a magloop, does this mean at 1 metre off the ground too ??
My vertical homebrew 1 metre magloop works well at 1 metre height !!

Regards.

Lee G6ZSG.

11185. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-01 08:20:25 UTC
From: leo1949uk@...
Topic: 11183 Message: 11185

Thankyou Guy..

2 metres- that is a rather convenient height as I have steel washing line posts that high ;o)
but I can eperiment also ! I can then return my "Lazy L" back to its original use namely, feeding my Yaesu FT817nd QRP... Looking forward to a response from Andrew !!

Regards.

Lee...G6ZSG.

==========

---In loopantennas@yahoogroups.com, <dx@...> wrote :

Hello Lee,

the Wellbrook compact loops are very flexible when it comes to mounting height. Even folks who have place it right at ground level (due to severe siting restrictions or just temporary use) report surprisingly good results.

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My vertical homebrew 1 metre magloop works well at 1 metre height !!

Regards.

Lee G6ZSG.

11186. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-01 13:25:36 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11186

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11187. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-01 13:25:36 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11187

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11188. Re: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-01 12:22:09 UTC
From: Keith Stevens
Topic: 11183 Message: 11188

Hi interesting on the wellbrook loop heigh, mine is only 1m off the ground works great, radio, tecsun pl 600Keith.

| |

✓ Get a Signature like this: Click Here!

On Sunday, 1 November 2015, 8:20, "leo1949uk@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Thankyou Guy..

2 metres- that is a rather convenient height as I have steel washing line posts that high ;o)
but I can eperiment also ! I can then return my "Lazy L" back to its original use namely, feeding my Yaesu FT817nd QRP... Looking forward to a response from Andrew !!

Regards.

Lee...G6ZSG.

==========

---In loopantennas@yahoogroups.com, <dx@...> wrote :

Hello Lee,
the Wellbrook compact loops are very flexible when it comes to mounting height. Even folks who have place it right at ground level (due to severe siting restrictions or just temporary use) report surprisingly good results.
Andrew at Wellbrook has told me that 1-1/2 to 2 meters is perfectly satisfactory. I have only heard of infrequent issues when mounting these loops extremely high... above 5 meters for example. In a very high signal urban area, excess height could contribute to overloading (which is a rare occurrence with any Wellbrook product).
Hopefully Andrew will respond and give us some additional thoughts on height above ground.
73,
Guy Atkins KE7MAVPuyallup, WA USA

---In loopantennas@yahoogroups.com, <leo1949uk@...> wrote :

I have ordered the Wellbrook ALA1530LNPro and expect it to arrive Wednesday hopefully...??
What is the best height to mount it ??1 metre magloops are reckoned to be best at one loop width high... as this Wellbrook ALA1530LNPro is mentioned in passing, as a magloop, does this mean at 1 metre off the ground too ??
My vertical homebrew 1 metre magloop works well at 1 metre height !!

Regards.

Lee G6ZSG.

11189. Re: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-03 08:17:58 UTC
From: leo1949uk@...
Topic: 11183 Message: 11189

Hi Keith... fine on the

I also have a Tecsun PL 600 and PL380.. an Eton G8 Traveler II and Eton G3 Globe Traveler... good little
radios except the G8 rubber feel case is rather sticky to hold I wonder if there`s a cure ?

Regards.

Lee...G6ZSG.

==========

Keith Stevens
Nov 1 12:22 PM

Hi interesting on the wellbrook loop heigh, mine is only 1m off the ground works great, radio, tecsun pl 600
Keith.

11190. Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-03 17:12:55 UTC
From: gnuarm.2007@...
Topic: 11190 Message: 11190

The prevailing wisdom on small loop antennas is that because the circumference is less than 1/10th the wavelength, the current is pretty much equal around the loop. But I have seen videos of measurements that show they are directional with most of the signal coming from the point opposite the capacitor.
That means many small loop antennas are directing most of their energy into the ground!

Anyone here done a test of their loop directionality? Seen any evidence that this is not correct?

Small Tuned Loop Radiation Direction https://www.youtube.com/watch?v=NdofH6R22Dg

https://www.youtube.com/watch?v=NdofH6R22Dg

Small Tuned Loop Radiation Direction https://www.youtube.com/watch?v=NdofH6R22Dg Note This is a long video of four clips, so fast forward when you feel you have seen enough of a particular clip. For many years I have been aware that there...

View on www.youtube.com https://www.youtube.com/watch?v=NdofH6R22Dg
Preview by Yahoo

I'm a little uncomfortable that this test uses a triangular loop, but he does show a round loop in one test (I think, a bit hard to see). Here is another video by the same guy showing the basics of his ideas. The stuff with the fluorescent tube get a bit tedious, you can skip over much of that.

Magnetic Loop Mysteries Explained https://www.youtube.com/watch?v=SUYI81dkEMA

https://www.youtube.com/watch?v=SUYI81dkEMA

Magnetic Loop Mysteries Explained https://www.youtube.com/watch?v=SUYI81dkEMA A number of years ago I designed and patented a way of feeding a small wire transmitting loop using a ferrite transformer and since then have read ...

View on www.youtube.com https://www.youtube.com/watch?v=SUYI81dkEMA
Preview by Yahoo

It is very hard to imagine no one has tested this in nearly 100 years of using magnetic loop antennas.

Rick

11191. Re: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-03 18:23:06 UTC
From: dx@...
Topic: 11183 Message: 11191

Hello Lee,

Your G8's sticky case is a very common problem with the Eton E1. The textured finish on these radios is an early and problem-prone formulation of "grippy" coatings, according to a chemical engineer that has posted some messages on the E1 Yahoo Group about the problem. What happens is that the coating breaks down prematurely and absorbs moisture from the air. It becomes sticky and never really recovers fully. The coating continues to disintegrate over time.

The solution is to fully remove the coating with a strong percentage of isopropyl alcohol, such as the 90% formulation. Note that the ~70% alcohol is NOT appropriate. Many E1 owners have laboriously scrubbed their receivers with the alcohol on a rag, but this is tedious and can result in scratches to the underlying plastic if you are not careful.

What I discovered is that if you fully remove the radio's knobs, PCB, and all internal parts you can submerse the case in a pan full of the alcohol, and the sticky goo begins to float off the plastic after 15 or 20 minutes. Then use a clean soft rag to remove any excess sticky mess. You will have to keep the rag wet with alcohol.

IMPORTANT! the clear plastic window on the radio's case will get foggy from the alcohol. You will need to restore its full clarity with plastic polish, preferably a multi-step cleaner. In the USA, Novus Plastic Polish is a popular choice.

The good thing is that the lettering on the radio is on the plastic itself, and will not come off with careful removal of the sticky finish. The textured coating is actually a clear spray onto the plastic during manufacture, although it turns slightly yellow with age.

The key point here is to avoid most of the scrubbing of the case by just soaking it in a pan of alcohol first. Let time and the submersion do most of the work for you.

73,

Guy Atkins
Puyallup, WA

---In loopantennas@yahoogroups.com, <leo1949uk@...> wrote :

Hi Keith... fine on the

I also have a Tecsun PL 600 and PL380.. an Eton G8 Traveler II and Eton G3 Globe Traveler... good little
radios except the G8 rubber feel case is rather sticky to hold I wonder if there`s a cure ?

Regards.

Lee...G6ZSG.

11192. Re: [loopantennas] Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-03 19:13:16 UTC
From: Andy
Topic: 11190 Message: 11192

I have seen demonstrations that show quite a bit more illumination of fluorescent bulbs, from around the vicinity of the tuning capacitor. I'm pretty sure that is because the *voltage* (not the current), and hence the E-field, is very non-constant around the small loop, and is maximum near the capacitor. But that is mostly if not entirely a "near field" effect --- which is to say, it is not a radiating field. It falls off after a short distance and doesn't contribute to radiation.

I have not seen any references that say the radiation might be stronger away from the capacitor end.

It is true that the current is *slightly* higher at the end opposite the capacitor (depending on loop size), but I think the difference can pretty much be ignored.

Anyway, I think it could be shown that a pair of incremental conductors, conducting slightly different current magnitudes, and separated by a meter or two, do not have any bias in radiation towards one side or the other. I don't have that in proof form; it just "feels" like it ought to be provable.

If you trust NEC simulations (and I'll admit there are good reasons why one might not), the radiation from a small round loop is for all practical purposes uniform in all directions, in the plane of the loop. I haven't tried a triangular loop yet.

Anything that is measured near a small loop, I would take with great suspicion. The near-field E and H fields do not relate directly to the far-field, and if one were to assume that a strong near-field means an equally strong far-field radiation, that would be incorrect.

Regards,
Andy

11193. Re: [loopantennas] Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-03 19:18:23 UTC
From: gnuarm.2007@...
Topic: 11190 Message: 11193

[Body unavailable in the source archive]

11194. Re: Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-03 19:25:39 UTC
From: gnuarm.2007@...
Topic: 11190 Message: 11194

Have you looked at the videos I posted links to? One clearly shows different current around the loop and the other clearly shows directionality in the plane of the loop. When I say "clearly", I mean if the measurements were done correctly and I don't see any indication they were not done correctly.

I *never* trust simulations if they disagree with real world measurements and I don't care *who* wrote the simulations. A simulation is a mathematical expression of what you think is happening and if that is not well understood or not implemented properly, the simulation results will not be right.

I would like to discuss the videos. But if you don't look at them we can't discuss them.

Rick

---In loopantennas@yahoogroups.com, <ai.egrps@...> wrote :

I have seen demonstrations that show quite a bit more illumination of fluorescent bulbs, from around the vicinity of the tuning capacitor. I'm pretty sure that is because the *voltage* (not the current), and hence the E-field, is very non-constant around the small loop, and is maximum near the capacitor. But that is mostly if not entirely a "near field" effect --- which is to say, it is not a radiating field. It falls off after a short distance and doesn't contribute to radiation.

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It is true that the current is *slightly* higher at the end opposite the capacitor (depending on loop size), but I think the difference can pretty much be ignored.

Anyway, I think it could be shown that a pair of incremental conductors, conducting slightly different current magnitudes, and separated by a meter or two, do not have any bias in radiation towards one side or the other. I don't have that in proof form; it just "feels" like it ought to be provable.

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Anything that is measured near a small loop, I would take with great suspicion. The near-field E and H fields do not relate directly to the far-field, and if one were to assume that a strong near-field means an equally strong far-field radiation, that would be incorrect.

Regards,
Andy

11195. Re: [loopantennas] Re: Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-04 00:08:11 UTC
From: Andy
Topic: 11190 Message: 11195

"Have you looked at the videos I posted links to?"

When I first replied, no I hadn't yet, because I didn't see them. They looked to me like ads at the bottom of the message. At first, I stopped reading just above them.

I started watching the first video but was interrupted and ran out of time. However, it clearly is NOT a small loop. The video states that it is a 1/4 wavelength loop. That means it is half the size of an ordinary half-wavelength dipole, then bent into a triangle. Such a large loop definitely doesn't have the same current everywhere along the loop.

I still need to watch the videos. But I've seen a video demonstration before that claims to measure the current along the circumference, which is a measurement I would take with much skepticism, due to the extremely high voltages present. Making a current detector that is totally insensitive to voltage or electric field, is difficult to do. So some interaction is likely.

"A simulation is a mathematical expression of what you think is happening and if that is not well understood or not implemented properly, the simulation results will not be right."

Definitely true!

Andy

11196. Re: [loopantennas] Re: Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-04 04:50:06 UTC
From: gnuarm.2007@...
Topic: 11190 Message: 11196

I completely missed that first part. Being a quarter wave antenna means it is *not* a small magnetic loop by definition. I have to assume the other video is the same way, operating at a much higher frequency than a small magloop would work with. That explains a *lot*. Thanks for catching this.

Rick

---In loopantennas@yahoogroups.com, <ai.egrps@...> wrote :

"Have you looked at the videos I posted links to?"

When I first replied, no I hadn't yet, because I didn't see them. They looked to me like ads at the bottom of the message. At first, I stopped reading just above them.

I started watching the first video but was interrupted and ran out of time. However, it clearly is NOT a small loop. The video states that it is a 1/4 wavelength loop. That means it is half the size of an ordinary half-wavelength dipole, then bent into a triangle. Such a large loop definitely doesn't have the same current everywhere along the loop.

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"A simulation is a mathematical expression of what you think is happening and if that is not well understood or not implemented properly, the simulation results will not be right."

Definitely true!

Andy

11197. Re: [loopantennas] Re: Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-04 05:47:12 UTC
From: Andy
Topic: 11190 Message: 11197

Now that I finally had time to watch both videos ...

I can't say if what he's saying is right or not. The first video uses what might be called a large-ish small loop; not a <1/10 wavelength loop. His webpage where he shows why the current is not uniform around the loop, uses the 1/4 wavelength loop to illustrate, and it makes sense to me, it is what I would have expected too (except that he says it's 50% at the ends, but I would call it 71% if it follows the sinusoidal distribution he shows). If you do the same thing with a 1/10 wavelength loop, the current is much more uniform (within about 5%) -- as most people claim it is.

On the other hand, his measurements with the homemade current probe seem to show a far bigger variation in current magnitude than his own theory predicts. What's up with that? I don't know. Maybe it's that interaction thing with the voltage and/or the E-field. In that video, he really is using a small (<1/10 wavelength) loop, where it "should" be more uniform.

I am uncertain about the first video. The triangular loop (yes the second one is circular) -- the size which is too large to be a "small loop" -- the fact that he is never really far-field (he barely crosses the "boundary" where near-field dominates), all make it slightly questionable. But his results seem very consistent.

The later shots in that video where he has a big van parked directly behind the antenna, are very suspicious. I would discount that part of the video.

"It is very hard to imagine no one has tested this in nearly 100 years of using magnetic loop antennas."

Let's think about that.

While loops have been around for 100 years, I think that resonant small loops with tuning capacitors, are much more recent.

Many versions do have the capacitor on the top, but some don't (some AlexLoops being an example).

If the radiation being off the bottom (the side opposite the cap) is real, a possible reason why it hasn't been discovered, is if nobody set it up to measure it in 3-D space. If you keep making loops the way you've always made them, you might never know that something is going on that you didn't have a reason to predict. If you only measure the radiation in the horizontal plane, and if the measurements always look like you expected them to be, then you might never know that something else is happening.

So yes, I can imagine that nobody found this in all that time.

Or maybe nobody saw it if Mr. Edginton's measurements are flawed.

Sometimes "warming the worms" is actually useful. I am a fan of NVIS for local/regional coverage. A lot of American research into NVIS, used directional antennas that pointed straight down! The idea was to make use of the reflection off the earth (or the water table underneath), rather than trying to avoid it.

In spite of NEC's modeling problems, I still like to see some correlation between what it predicts, and what you measure. NEC is based on sound principles (e.g., Maxwell's equations), which still hold true. I would like to see studies in NEC that agree with his measurements.

Well, enough of my rant/rambling.

Andy

11198. Re: [loopantennas] Re: Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-04 05:50:37 UTC
From: Andy
Topic: 11190 Message: 11198

In the second video, he claims that antenna is <10 wavelength. The frequency is lower (10.5 meters) so I guess the loop's circumference is a meter or a little less. It is hard to gauge it from the video.

Andy

11199. Re: Directionality in the Plane of the Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-04 17:42:16 UTC
From: jwin95@...
Topic: 11190 Message: 11199

Rick,

You would do well to question the results of NEC (at least NEC 2) when modeling loops. I have found significant difference between NEC2 (MOM sim and not completely Maxwell-based) and Ansoft HFSS (FEM sim and closer to Maxwell eq's based) results when looking at radiation patterns. Actual practice (building 1/4 wavelength circumference loops) shows that the feed Z (fed with a transformer as Ben Edginton shows) is always reported to be way too low with NEC 2 based modeling. This was for both 4NEC2 and EZNEC too.

I think this is the 'dirty little secret' few people know about.

73, Jim WB5WPA

11200. Re: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-05 10:09:11 UTC
From: leo1949uk@...
Topic: 11183 Message: 11200

Thanks Guy for G8 sticky case cure.. saved it as a text file on the desktop !!

Can get isopropyl alcohol as rubbing alcohol and it`s also used as switch cleaner !! I can get the 99% or is that
too strong a formula?

Regards.

Lee...G6ZSG.

Hello Lee,

Your G8's sticky case is a very common problem with the Eton E1. The textured finish on these radios is an early and problem-prone formulation of "grippy" coatings, according to a chemical engineer that has posted some messages on the E1 Yahoo Group about the problem. What happens is that the coating breaks down prematurely and absorbs moisture from the air. It becomes sticky and never really recovers fully. The coating continues to disintegrate over time.

The solution is to fully remove the coating with a strong percentage of isopropyl alcohol, such as the 90% formulation. Note that the ~70% alcohol is NOT appropriate. Many E1 owners have laboriously scrubbed their receivers with the alcohol on a rag, but this is tedious and can result in scratches to the underlying plastic if you are not careful.

What I discovered is that if you fully remove the radio's knobs, PCB, and all internal parts you can submerse the case in a pan full of the alcohol, and the sticky goo begins to float off the plastic after 15 or 20 minutes. Then use a clean soft rag to remove any excess sticky mess. You will have to keep the rag wet with alcohol.

IMPORTANT! the clear plastic window on the radio's case will get foggy from the alcohol. You will need to restore its full clarity with plastic polish, preferably a multi-step cleaner. In the USA, Novus Plastic Polish is a popular choice.

The good thing is that the lettering on the radio is on the plastic itself, and will not come off with careful removal of the sticky finish. The textured coating is actually a clear spray onto the plastic during manufacture, although it turns slightly yellow with age.

The key point here is to avoid most of the scrubbing of the case by just soaking it in a pan of alcohol first. Let time and the submersion do most of the work for you.

73,

Guy Atkins
Puyallup, WA

11201. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-05 14:43:57 UTC
From: leo1949uk@...
Topic: 11183 Message: 11201

My Wellbrook ALA1530LNPro arrived today Thursday 5th and I quickly assembled it (after changing the antenna BNC plug to a more convenient PL259 plug to suit my adapters) and mounted it on a commercial PA Speaker tripod in my kitchen, then set about comparing it to my Wideband "lazy L".

The first thing I noticed was the extra gain on long and medium wave which needed the attenuator switched on to stop the intermodulation (not very happy about that) but the indoors ALA1530LNPro otherwise almost kept pace with the "L" so I can live with it.

Shortwave bands... the ALA1530LNPro didn`t have so much gain as long and medium wave so I didn`t need the att swtch on tho` it was still a bit gainy, compared to the "L" and tho` the ALA1530LNPro was indoors it picked up most stations the "L" did but with a poorer noise level altho` some strong stations were weaker on the "L".. I suppose the "L " is directional too like the ALA1530LNPro which has quite a sharp null.

Not a scientific test by any stretch of the imagination but it seems to bode well when I set the ALA1530LNPro up outside with a rotator, then compare it to the "L"

Regards.

Lee...G6ZSG

---

leo1949uk
Oct 30

I have ordered the Wellbrook ALA1530LNPro and expect it to arrive Wednesday hopefully...??
What is the best height to mount it ??1 metre magloops are reckoned to be best at one loop width high... as this Wellbrook ALA1530LNPro is mentioned in passing, as a magloop, does this mean at 1 metre off the ground too ??
My vertical homebrew 1 metre magloop works well at 1 metre height !!

Regards.

Lee G6ZSG.

11202. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-05 16:26:33 UTC
From: daiche@...
Topic: 11183 Message: 11202

Hi Lee,

For the 1530's to perform at their best, they need to be at least 15'-20' away from the house because of all the noisemakers. I was testing a passive 35' delta loop to a 1530LN loop this morning for a comparison on TransPacific stations. Both were about 50' away from the house and actually the 1530LN seemed to do a bit better. The 1530LN also had a flatter response. It looked like my passive 16:1 transformer has some rolloff at the low end of MW. I have been quite pleased with the Wellbrook products since 2008, when I started using the ALA100 and FLG100 line.

Dave Aichelman N7NZH Grants Pass, Oregon

11203. Re: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-05 18:13:55 UTC
From: John Maxwell
Topic: 11183 Message: 11203

On 11/05/2015 05:09:11 AM, leo1949uk@... [loopantennas] wrote:
> Can get isopropyl alcohol as rubbing alcohol and it`s also used as
> switch cleaner !! I can get the 99% or is that
> too strong a formula?
>

I can't speak to the specific application you're using, but I can provide a little information about alcohol that may be relevant:

1) Rubbing alcohol usually contains lanolin or other oils to prevent skin drying that pure alcohol will cause; that's what make it specifically "rubbing" alcohol. Not all alcohol sold in drugstores is actually rubbing alcohol, though, and the oil may not be a problem for your purposes anyway.

2) 99% alcohol won't stay 99% for very long without extraordinary effort to keep it so; alcohol is hygroscopic, meaning that it will absorb water from the air (or anywhere else). The purer the alcohol, the more hygroscopic it is; that's why most common alcohol sold is at most 85%-90%; by that point the hygroscopic effect has dropped of to the point where strenuous measures to keep it under control aren't necessary any more. Fortunately, for most purposes a little bit of water does no harm.

-John

--
John Maxwell KB3VLL jmax@...

No matter how cynical you get, it is impossible to keep up.
-Lily Tomlin

11204. RE: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-05 15:44:02 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11183 Message: 11204
Attachments: 2 described; binary payloads are missing from this source WARC

Lee.

Could you clarify for me whether the noise level on the short wave bands was higher or lower? Also did you test the twenty and ten meter bands. How sensitive is the loop at these frequencies?

Best regards,

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Thursday, November 05, 2015 9:44 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

My Wellbrook ALA1530LNPro arrived today Thursday 5th and I quickly assembled it (after changing the antenna BNC plug to a more convenient PL259 plug to suit my adapters) and mounted it on a commercial PA Speaker tripod in my kitchen, then set about comparing it to my Wideband "lazy L".

The first thing I noticed was the extra gain on long and medium wave which needed the attenuator switched on to stop the intermodulation (not very happy about that) but the indoors ALA1530LNPro otherwise almost kept pace with the "L" so I can live with it.

Shortwave bands... the ALA1530LNPro didn`t have so much gain as long and medium wave so I didn`t need the att swtch on tho` it was still a bit gainy, compared to the "L" and tho` the ALA1530LNPro was indoors it picked up most stations the "L" did but with a poorer noise level altho` some strong stations were weaker on the "L".. ! I suppose the "L " is directional too like the ALA1530LNPro which has quite a sharp null.

Not a scientific test by any stretch of the imagination but it seems to bode well when I set the ALA1530LNPro up outside with a rotator, then compare it to the "L"

Regards.

Lee...G6ZSG

---
leo1949uk
Oct 30
I have ordered the Wellbrook ALA1530LNPro and expect it to arrive Wednesday hopefully...??
What is the best height to mount it ??1 metre magloops are reckoned to be best at

one loop width high... as this Wellbrook ALA1530LNPro is mentioned in passing,
as a magloop, does this mean at 1 metre off the ground too ??
My vertical homebrew 1 metre magloop works well at 1 metre height !!

Regards.

Lee G6ZSG! .

11205. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-06 04:14:47 UTC
From: leo1949uk@...
Topic: 11183 Message: 11205

Thanks Dave for the info... my next move is to set the loop up outdoors, got to get some self amalgamating tape first and a bit of dry weather hi.

Regards.

Lee...G6ZSG.

Hi Lee,

For the 1530's to perform at their best, they need to be at least 15'-20' away from the house because of all the noisemakers. I was testing a passive 35' delta loop to a 1530LN loop this morning for a comparison on TransPacific stations. Both were about 50' away from the house and actually the 1530LN seemed to do a bit better. The 1530LN also had a flatter response. It looked like my passive 16:1 transformer has some rolloff at the low end of MW. I have been quite pleased with the Wellbrook products since 2008, when I started using the ALA100 and FLG100 line.

Dave Aichelman N7NZH Grants Pass, Oregon

11206. Re: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-06 04:20:26 UTC
From: leo1949uk@...
Topic: 11183 Message: 11206

Yes, thanks John for reminding me... that had slipped my memory about alcohol and water.

Regards.

Lee..G6ZSG.

11207. RE: [loopantennas] Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-06 04:34:23 UTC
From: leo1949uk@...
Topic: 11183 Message: 11207

Jef
It was higher Jeff, because the loop was indoors I suppose and no, I didn`t check the ham bands because I didn`t get the loop for that purpose... I will set up the loop outside and check
the ham bands and let you know about noise performance...

Regards.

Lee...G6ZSG.

Lee.

Could you clarify for me whether the noise level on the short wave bands was higher or lower? Also did you test the twenty and ten meter bands. How sensitive is the loop at these frequencies?

Best regards,

Jef

11208. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-06 20:06:58 UTC
From: Jim
Topic: 11183 Message: 11208

Lee, wat abt signal to noise ratio?

That is typically a loop performs well

Jim
W6AIM

.

11209. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-06 20:09:28 UTC
From: Jim
Topic: 11183 Message: 11209

Dave,

What core material are you using for the 16:1 transformer?

Jim
W6AIM

11210. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-07 01:17:55 UTC
From: daiche@...
Topic: 11183 Message: 11210

Hi Jim, It is a sealed special order product from the former PAR Electronics, just like the 9:1 matchbox in their SWL antenna. I know it is a binocular core, but which one and what the actual winding counts are, I don't know. I don't know if the new guy at LNR Precision would make them again, but it was a pretty good deal at $24 each, not to have to do it myself. I have several 16:1's and 9:1's and they have the extra screw mounts for grounds on each side of the isolated transformer. I use them without any ground connection, but should probably experiment. I usually use Wellbrook ALA100 or FLG100 heads for my loop antennas, but I am a few miles away from 10KW and 5KW stations on a river bottom and have signals during the day at less than -10 dbm, which blows away all my SDR radios, some even with attenuation. So, I have gone passive here in GP.

Dave Aichelman N7NZH Grants Pass, Oregon

---In loopantennas@yahoogroups.com, <jbollit@...> wrote :

Dave,

What core material are you using for the 16:1 transformer?

Jim
W6AIM

11211. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-07 08:38:16 UTC
From: leo1949uk@...
Topic: 11183 Message: 11211

I don`t know Jim... as the OP said, it was not a scientific test !!! also, it was an indoors out of the box comparison ! ... Sorry.

Regards.

Lee...G6ZSG.

Jim
Nov 6 8:06 PM

Lee, wat abt signal to noise ratio?

That is typically a loop performs well

Jim
W6AIM

11212. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-07 14:34:00 UTC
From: Jim
Topic: 11183 Message: 11212

No problem. I am sure you will be happy with the loop. They are best for bulling a pest or noise so you can hear the signal underneath

Jim
W6AIM

11213. Re: Wellbrook ALA1530LNPro Best mounting height ??

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-07 15:31:30 UTC
From: JRTOW3RD@...
Topic: 11183 Message: 11213

As an aside, when I moved to our new home - a garden home with a walkup attic and steep roof - 7/13, I carried my Pixel RF Pro-1a from my old home, where it had been on a 5' mast attached to my low deck with it's center ~8' above ground. The mast was placed in a tripod base on the floored attic about centered in the house. A short RG6 jumper connected it to the already in place CATV (RG6) feed to my office below - I was listening in minutes. The HOA prevents outdoor antennas, so my antennas are in the attic. Well, the one loop is it for now! My previous address - for 37 years - provided room for a myriad of antennas, including LW, AD sloper, and even a TTFD. It also had an aperiodic S5-S8 EMI source that peaked on the pole in front of my house. The loop was bought to null the noise, which it did until1/12, when a tornado caused some 'urban redevelopment'.

I lost a few shingles, wind chimes, and my deck furniture - my loop spun in it's mount, winding up the coax. When the power returned, it was fine. When the neighboring streets got new poles and high voltage feeds, APC must have found more leaking insulators - the EMI came from several directions and ran S7-S9+ - the loop's nulling ability was all but useless - I quit listening. When I moved here - I finally had the bliss of underground utilities. I live in the quietest neighborhood - no EMI! Oh, some RFI from the fiber optic to twisted pair phone MODEM in a metal box in the front yard - but it was nulled by the 'loop'.

Simply stated, put the Faraday-shielded H-field loop where you can - and null interference - and enjoy it. My only problem with the Wellbrook loops was that they used BNC connectors, which were designed for indoor use. Type F connectors can be waterproof, are easily installed, and permit RG-6QS use - great low loss cable. Just put the loop 'in the clear' and you both will be 'happy'.

John

PS I posted a photo of my loop in the attic.

11214. Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 01:08:51 UTC
From: w4msl@...
Topic: 11214 Message: 11214

I want to make as large a loop as necessary for good reception (but no larger than needed) which can be concealed behind the bookcases in my office. Orientation for the little freebie AM loop which came with my old AM/FM Stereo receiver is parallel to the wall (turning it nulls the stations of interest). So, I'm supposing that a large loop placed against the same wall but behind (non-metallic) cabinets might work better than the little loop. FWIW: I can get the stations presently, but reception is weak and a bit noisy. I'd like to get better clarity and less noise.

Here are just a couple of the rectangular dimensions I can work with:

6'x6' and 2'x7' — these are just some dimensions of convenience which maximize loop size for the given spaces but can still be placed behind the cabinets and against the wall. The FREQUENCY range of interest is 105-106mhz. I don't really need a full AM broadcast spectrum antenna, as the stations of interest fall in this narrow band. So, I'd like to know how I might determine an optimal LENGTH of wire for this frequency range for both of the respective loop dimensions, as well as suggestions for actual loop dimensions. And, could this be constructed w/o the need for variable capacitors, given that it's intended for such a narrow range? and assuming that an optimal wire length for this frequency range can be determined? I'd prefer just to run the wire from the loop directly to the AM antenna jack (mono), as I can't both conceal the antenna and place the radio within the loop proper for induction coupling.

Circles considered, but too much bother, I think, to do. Four pegs anchored behind the cabined will let me wind a square/rectangular loop, but a circle would be much more work.

Hope this makes sense. I've never tried this kind of antenna before. Suggestions appreciated and solicited.

Many thanks.

11215. RE: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 05:46:39 UTC
From: Fredric J. Einstein
Topic: 11214 Message: 11215

So, what you really want is a Kiwa Loop!

I want to make as large a loop as necessary for good reception (but no larger than needed) which can be concealed behind the bookcases in my office.

11216. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 06:01:08 UTC
From: Jim
Topic: 11214 Message: 11216

I have the larger Kiwa for sale.

Contact me off list if interested

Jim
W6AIM

.

Sent from my iPad

On Nov 9, 2015, at 9:46 PM, "'Fredric J. Einstein' feinstei1@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

> So, what you really want is a Kiwa Loop!
>
>
>
> I want to make as large a loop as necessary for good reception (but no larger than needed) which can be concealed behind the bookcases in my office.
>
>

11217. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 06:34:25 UTC
From: Richard (Rick) Karlquist
Topic: 11214 Message: 11217

On 11/9/2015 5:08 PM, w4msl@... [loopantennas] wrote:
> I want to make as large a loop as necessary for good reception (but no
> larger than needed) which can be concealed behind the bookcases in my
> office. Orientation for the little freebie AM loop which came with my
> old AM/FM Stereo receiver is parallel to the wall (turning it nulls the

In general, those old antennas were resonated with a variable capacitor
or varactor so that they tracked the tuning of the receiver. If you
replace the stock antenna coil with some loop, the loop needs to have
the same inductance as the built in loop. This will establish the
largest loop that will work. The sensitivity of a loop is
proportional to the area, so a loop with 16 times the area
of the stock loop will give you something like 12 dB. That may
be enough. Any solution that does not resonate the loop starts
out with a big handicap and would require a huge loop to substantially
improve the sensitivity.

Rick N6RK

11218. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 12:33:21 UTC
From: w4msl@...
Topic: 11214 Message: 11218

Yeah. That's what I thought. I was hoping to just hand some large concentric (or parallel) loops on a wall and see what happened. I could still try that, I suppose, but I do see that I really need to sort the turning of this. Thanks.

11219. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 15:11:17 UTC
From: gnuarm.2007@...
Topic: 11214 Message: 11219

Here are some ratios that help with situations like this.

L is inductance, r is radius of loop, N is number of turns, E is voltage.

$Q \propto L / (r * N)$

$E \propto r^2 * N * Q$

$E \propto r^2 * N * L / (r * N)$

$E \propto r * L$

If L is constant

$E \propto r$

So a single turn loop will give the highest voltage for a given inductance.

Rick

11220. RE: Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 18:18:45 UTC
From: Guy Atkins
Topic: 11214 Message: 11220

Hi Rick,

I'm not sure your comment about loop sensitivity vs. size always applies. What you state is what I've understood for years, but recent results with the current improved models of Wellbrook 1-meter active loops are causing me to question that thinking.

A friend of mine from Grants Pass, Oregon (who was with me at the recent Rockworks, Oregon DXpedition) has been carefully comparing a 35-ft. long X 20 ft. high delta loop antenna with a 16:1 balun against a 1-meter Wellbrook ALA1530LN loop. He has been using an Elad FDM-S2 receiver to compare signal-to-noise levels of Japanese, Korean, and Chinese broadcast band signals at local dawn. He's done this for a number of days, and he's also sent me some of the "A-B" comparison WAV files to run through my own SDR software.

We are both finding that the trans-Pacific MW signals are better (higher S/N) on the small active Wellbrook antenna than the much larger passive loop. I measured the difference in most cases as 5 to 8 dB improvement. This is enough to make a difference in weak signal reception on the split frequencies (9 kHz channel spacing).

The passive loop is getting ample signal... no problem there. The amplified Wellbrook has somewhat higher noise floor than the passive antenna, *BUT* signal-to-noise on the Wellbrook is better on most cases and intelligibility of the weak signals is improved. Curiously, the only frequency for which the large passive loop was better is 1017 kHz. That signal was likely CNR1 China broadcasting in Korean, based on the UTC time and transmitter power (reception was too weak to tell if the language was Korean or Japanese).

Whatever the reason for the small loop's better performance on long-haul MW DX, my friend is happy about the findings because the Wellbrook is less noticeable to neighbors than the 35 ft. passive loop. Our results are just preliminary, but have always been in the Wellbrook's favor each day of the comparisons. BTW, both antennas are in the middle of a large field and a considerable distance from buildings, metal structures, power lines, and each other.

Guy Atkins
Puyallup, WA

On 11/9/2015 5:08 PM, w4msl@... [loopantennas] wrote:

In general, those old antennas were resonated with a variable capacitor or varactor so that they tracked the tuning of the receiver. If you replace the stock antenna coil with some loop, the loop needs to have the same inductance as the built in loop. This will establish the largest loop that will work. The sensitivity of a loop is proportional to the area, so a loop with 16 times the area of the stock loop will give you something like 12 dB. That may be enough. Any solution that does not resonate the loop starts out with a big handicap and would require a huge loop to substantially improve the sensitivity.

Rick N6RK

11221. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 19:20:16 UTC
From: 3ym3ym@...
Topic: 11214 Message: 11221

Make sure there is no electrical wiring in that wall.
Otherwise the coupling to the loop would be almost perfect, and you will only hear the strongest stations, the rest drowned in hum.
A very small loop (or even the internal small ferrite bar) would be better, because it can be rotated to null the hum.

73, Mike

11222. Re: [loopantennas] RE: Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 19:35:03 UTC
From: Richard (Rick) Karlquist
Topic: 11214 Message: 11222

My comment was in reference to passive loop gain, which
I referred to as "sensitivity". Active loop gain, and
signal to noise ratio is another discussion. The
original poster seemed to just need more signal to overcome
the noise in his consumer receiver. I'm sure the
original poster is not up for buying a $400 antenna just
to listen to local AM stations.

Rick N6RK

> Hi Rick
>
> I'm not sure your comment about loop sensitivity vs. size always
> applies. What you state is what I've understood for years, but recent
> results with the current improved models of Wellbrook 1-meter active
> loops are causing me to question that thinking.
>
> A friend of mine from Grants Pass, Oregon (who was with me at the recent
> Rockworks, Oregon DXpedition) has been carefully comparing a 35-ft. long
> X 20 ft. high delta loop antenna with a 16:1 balun against a 1-meter
> Wellbrook ALA1530LN loop. He has been using an Elad FDM-S2 receiver to
> compare signal-to-noise levels of Japanese, Korean, and Chinese
> broadcast band signals at local dawn. He's done this for a number of
> days, and he's also sent me some of the "A-B" comparison WAV files to
> run through my own SDR software.
>
> We are both finding that the trans-Pacific MW signals are better (higher
> S/N) on the small active Wellbrook antenna than the much larger passive
> loop. I measured the difference in most cases as 5 to 8 dB improvement.
> This is enough to make a difference in weak signal reception on the
> split frequencies (9 kHz channel spacing).
>
> The passive loop is getting ample signal... no problem there. The
> amplified Wellbrook has somewhat higher noise floor than the passive
> antenna, *BUT* signal-to-noise on the Wellbrook is better on most cases
> and intelligibility of the weak signals is improved. Curiously, the only
> frequency for which the large passive loop was better is 1017 kHz. That
> signal was likely CNR1 China broadcasting in Korean, based on the UTC
> time and transmitter power (reception was too weak to tell if the
> language was Korean or Japanese).
>
> Whatever the reason for the small loop's better performance on long-haul
> MW DX, my friend is happy about the findings because the Wellbrook is
> less noticeable to neighbors than the 35 ft. passive loop. Our results
> are just preliminary, but have always been in the Wellbrook's favor each

> day of the comparisons. BTW, both antennas are in the middle of a large
> field and a considerable distance from buildings, metal structures,
> power lines, and each other.
>
> Guy Atkins
> Puyallup, WA
>
>
>
> _____
>
> On 11/9/2015 5:08 PM, w4msl@...
> <mailto:w4msl@...> [loopantennas] wrote:
>
> In general, those old antennas were resonated with a variable capacitor
> or varactor so that they tracked the tuning of the receiver. If you
> replace the stock antenna coil with some loop, the loop needs to have
> the same inductance as the built in loop. This will establish the
> largest loop that will work. The sensitivity of a loop is
> proportional to the area, so a loop with 16 times the area
> of the stock loop will give you something like 12 dB. That may
> be enough. Any solution that does not resonate the loop starts
> out with a big handicap and would require a huge loop to substantially
> improve the sensitivity.
>
> Rick N6RK
>
>
>

11223. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 19:47:06 UTC
From: dannibou@...
Topic: 11214 Message: 11223

Jim. I would be interested in the kiwa loop but I don't know with the new fu....yahoo how to find your email adress. If you can, write me at my mail address. Thanks
Danny

11224. Re: [loopantennas] RE: Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-10 20:18:21 UTC
From: Andrew Ikin
Topic: 11214 Message: 11224

Hello Guy,

What you may be seeing with the ALA1530LN is that it has a near to noiseless amplification plus an optimum loop match in the AM BAND.

On the point of the “near to noiseless amplification” I had to seek professional help from Professor Michael Underhill G3LHZ formerly of Surrey University to work out the noise figure from my observations. Basically, what I was seeing when the noise floor was considerably lower than the thermal resistor noise plus the amplifier gain; was due to the amplifier having a dynamic input resistance (z in) that is noiseless except for the Jfets. Mike Underhill worked out the NF for the ALA1530LN and the ALA1530LNPro to be approx. 0.2dB, this equates to a noise temperature of 9.5 degrees Kelvin.

73

Andrew Ikin

From: mailto:loopantennas@yahoogroups.com
Sent: Tuesday, November 10, 2015 6:18 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] RE: Large Indoor AM Broadcast Receiving Loop

Hi Rick,

I'm not sure your comment about loop sensitivity vs. size always applies. What you state is what I've understood for years, but recent results with the current improved models of Wellbrook 1-meter active loops are causing me to question that thinking.

A friend of mine from Grants Pass, Oregon (who was with me at the recent Rockworks, Oregon DXpedition) has been carefully comparing a 35-ft. long X 20 ft. high delta loop antenna with a 16:1 balun against a 1-meter Wellbrook ALA1530LN loop. He has been using an Elad FDM-S2 receiver to compare signal-to-noise levels of Japanese, Korean, and Chinese broadcast band signals at local dawn. He's done this for a number of days, and he's also sent me some of the "A-B" comparison WAV files to run through my own SDR software.

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Whatever the reason for the small loop's better performance on long-haul MW DX, my friend is happy about the findings because the Wellbrook is less noticeable to neighbors than the 35 ft. passive loop. Our results are just preliminary, but have always been in the Wellbrook's favor each day of the comparisons. BTW, both antennas are in the middle of a large field and a considerable distance from buildings, metal structures, power lines, and each other.

Guy Atkins
Puyallup, WA

_____
On 11/9/2015 5:08 PM, w4msl@... [loopantennas] wrote:

In general, those old antennas were resonated with a variable capacitor or varactor so that they tracked the tuning of the receiver. If you replace the stock antenna coil with some loop, the loop needs to have the same inductance as the built in loop. This will establish the largest loop that will work. The sensitivity of a loop is proportional to the area, so a loop with 16 times the area of the stock loop will give you something like 12 dB. That may be enough. Any solution that does not resonate the loop starts out with a big handicap and would require a huge loop to substantially improve the sensitivity.

Rick N6RK

11225. Re: [loopantennas] RE: Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 02:51:27 UTC
From: daiche@...
Topic: 11214 Message: 11225

Hi Andy,

Guy and I have been measuring my new 1530LN loops to my 35' passive delta. The passive matchbox is a binocular core based 16:1 transformer made by the former PAR Electronics (now LNR Precision). It does seem to have a bit of low-end rolloff, possibly from not having enough total windings to cover the low end of MW and LW. Thanks for the great new loops, which make it easy to have a small loop that matches or beats larger passive loops in performance!

Dave Aichelman N7NZH Grants Pass, Oregon

11226. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 03:38:12 UTC
From: vk2tti@...
Topic: 11214 Message: 11226

Greetings W4MSL from VK land. If I have read your request rightly you want a loop to receive "frequency range of interest is 105 - 106mhz". I presume you mean Megahertz and not millihertz.. 105 - 106Mhz is in the FM broadcast band not the MW broadcast band. If this is the case a MW ioop antenna is the last thing you need!!! A full wavelength at 105.5MHz is about 2.7 metres. You say you feed the signal into a MW socket. Has your radio an FM socket? If so cut 2.7m of wire, bare the ends of insulation, touch the bare ends, appropriately, to the FM socket. If it's good you have your answer. Regards vk2tti

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
09 Nov 2015 17:08:51 -0800
Subject:
[loopantennas] Large Indoor AM Broadcast Receiving Loop

I want to make as large a loop as necessary for good reception (but no larger than needed) which can be concealed behind the bookcases in my office. Orientation for the
little
freebie AM loop which came with my old AM/FM Stereo receiver is parallel to the wall (turning it nulls the stations of interest). So, I'm supposing that a large loop placed against the same wall but behind (non-metallic) cabinets might work better than the little loop. FWIW: I can get the stations presently, but reception is weak and a bit noisy. I'd like to get better clarity and less noise.

Here are just a couple of the rectangular dimensions I can work with:

6'x6' and 2'x7' — these are just some dimensions of convenience which maximize loop size for the given spaces but can still be placed behind the cabinets and against the wall. The FREQUENCY range of interest is 105-106mhz. I don't really need a full AM broadcast spectrum antenna, as the stations of interest fall in this narrow band. So, I'd like to know how I might determine an optimal LENGTH of wire for this frequency range for both of the respective loop dimensions, as well as suggestions for actual loop dimensions. And, could this be constructed w/o the need for variable capacitors, given that it's intended for such a narrow range? and assuming that an

optimal wire length for this frequency range can be determined? I'd prefer just to run the wire from the loop directly to the AM antenna jack (mono), as I can't both conceal the antenna and place the radio within the loop proper for induction coupling.

Circles considered, but too much bother, I think, to do. Four pegs anchored behind the cabined will let me wind a square/rectangular loop, but a circle would be much more work.

Hope this makes sense. I've never tried this kind of antenna before. Suggestions appreciated and solicited.

Many thanks.

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11214;_ylc=X3oDMTJyNHV0ZXQ4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTIxNARzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0NDcxMjY3NTU-?act=reply&messageNum=11214
[2]
mailto:w4msl@...?subject=Re%3A%20Large%20Indoor%20AM%20Broadcast%20Receiving%20Loop
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20Large%20Indoor%20AM%20Broadcast%20Receiving%20Loop
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmNGs3NmZ1BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0NDcxMjY3NTU-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11214;_ylc=X3oDMTM3MDIxMTlhBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTIxNARzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0NDcxMjY3NTUEdHBjSWQDMTEyMTQ-
[6] http://groups.yahoo.com/group/loopantennas/links
[7] http://groups.yahoo.com/group/loopantennas/files
[8] http://ph.groups.yahoo.com/group/loopantennas/photos
[9]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmaHVrYmI3BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0NDcxMjY3NTU-
[10]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnYjYyM2dzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDQ3MTI2NzU1
[11]
https://groups.yahoo.com/neo/groups/loopantennas/photos/photostream;_ylc=X3oDMTJnZzhyb2ZlBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2cGhvdARzdGltZQMxNDQ3MTI2NzU1

[12] https://groups.yahoo.com/neo;_ylc=X3oDMTJlMTNuYTVrBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ0NzEyNjc1NQ--
[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14] mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11227. Re: [loopantennas] Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 04:21:51 UTC
From: w4msl@...
Topic: 11214 Message: 11227

Sorry. I conflated one project with another! I meant AM, and supplied the FM frequencies of interest from my other project. Too many recipes for only one cook! Sheesh...glad YOU were paying attention, because I certainly wasn't when I wrote that post. Thanks. So...let's say AM frequency of 650Khz, which is close enough. So, that does make a bit of a difference...

11228. Re: [loopantennas] RE: Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 08:42:14 UTC
From: Andrew Ikin
Topic: 11214 Message: 11228

Hello Dave,

For MW/LW you need to try to match the loop z to the receiver z. So as a compromise match the low end of the MW band to the receiver; say 50 Ohms. Therefore, a 16:1 transformer (800 to 50 Ohms) will not provide the correct match as the loop z is much lower than 800 Ohms at approx. 500kHz. Therefore, I would suggest you experiment with a 1:1 transformer.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Wednesday, November 11, 2015 2:51 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] RE: Large Indoor AM Broadcast Receiving Loop

Hi Andy,

Guy and I have been measuring my new 1530LN loops to my 35' passive delta. The passive matchbox is a binocular core based 16:1 transformer made by the former PAR Electronics (now LNR Precision). It does seem to have a bit of low-end rolloff, possibly from not having enough total windings to cover the low end of MW and LW. Thanks for the great new loops, which make it easy to have a small loop that matches or beats larger passive loops in performance!

Dave Aichelman N7NZH Grants Pass, Oregon

11229. Re: [loopantennas] RE: Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 16:11:38 UTC
From: daiche@...
Topic: 11214 Message: 11229

Hi Andy,

I have the opportunity to experiment more at this location. I am next to a College and have a field that is several hundred feet across and rather quiet, perfect for comparing antennas and such. So, this gave me a real good opportunity to try a passive matchbox vs several of your loops. I could tell right away there was somewhat of a mismatch on the passive loop, but what I was really trying to see was the contrast of S/N on each, taking into account a different noisefloor from amplified vs passive matchboxes.

Frankly I marvel at how well the various Wellbrook heads do, even with a higher noisefloor compared to a passive one. Basically the Wellbrook S/N is as good or better in each case, even though the antenna loops are much smaller, ie 35' for the passive loop vs 7.5' square for the active loop. Also, I have been comparing the 1m 1530LN to these two antennas also.

One of the problems these days is that it is harder to put up a large antenna, both from a space standpoint and also from the ability to find a relatively noise-free location. This lucky location for me, really lets me see your antenna products shine under very weak signal conditions. For example, I am seeing the 400 watt HPONS stations in Australia just above the MW band consistently at 10-15db above the noisefloor on my 7.5' square loop using an FLG100 (original not new LN) head. The 1m 1530LN sees them as does the 35' passive loop. Both the 1530LN and FLG100 based antennas see as well or better than the larger passive loop, which tells me I don't need a large antenna for good results. By the way, those 400 watt stations are 7000+ miles away, just amazing to me for the MW band!

Dave Aichelman N7NZH Grants Pass, Oregon

11230. Transmitting loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 15:16:09 UTC
From: jonathan white
Topic: 11230 Message: 11230

Can anyone help,with my problem.
DUE TO CIRCUMSTANCES i am moving to a flat and going to loose my
invertled L.
so I am wondering if there is any way I can TX about 15watts of jt65,and
100 watts ssb for contests is ANYTHING IN Dr Mike Underhills
loops...thought of 22 mm copper and 45 deg bends and 2mts dia anyone
have a solution to this problem.
Regards Jon g8ccl

11231. Re: Transmitting loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 21:28:14 UTC
From: derf.mockford@...
Topic: 11230 Message: 11231

Hi Jon, signup to the Yahoo Group 'MagLoop' then go into the Files section and pull down the file: _The Underestimated Magnetic Loop HF Antenna_V1. 2.pdf. This document by Leigh Turner VK5KLT is a wealth of excellent design data. There are lots of designs that use coax, wires, aluminium foil etc and all have varying success. Leigh's document cuts through lots of folklore and tells you how to do it properly.
Good luck, 73, Derf, G8ZGK

11232. Re: [loopantennas] Transmitting loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-11 23:15:26 UTC
From: Richard (Rick) Karlquist
Topic: 11230 Message: 11232

On 11/11/2015 7:16 AM, jonathan white jonathan.white20@...
[loopantennas] wrote:
> Can anyone help,with my problem.
> DUE TO CIRCUMSTANCES i am moving to a flat and going to loose my
> invertled L.
> so I am wondering if there is any way I can TX about 15watts of jt65,and
> 100 watts ssb for contests is ANYTHING IN Dr Mike Underhills
> loops...thought of 22 mm copper and 45 deg bends and 2mts dia anyone
> have a solution to this problem.
> Regards Jon g8ccl

Rather than a transmitting loop, simply get a mobile type screwdriver antenna and install it inside your flat and build the best counterpoise your circumstances permit. Ideal way to go is to cover the floor with hardware cloth mesh and put rugs over the top of it.

Alternately, make a dipole out of two screwdriver antennas back to back. This works well if your flat is on an upper floor.

Rick N6RK

11233. hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-23 13:39:16 UTC
From: jonathanwhite143@...
Topic: 11233 Message: 11233

a few tears ago,a profesor from an English univrtsity,due to my epilepsy/bipolar .I cant think of his nam.
now the question ;DO THERE LOOPS WORK IN ORACTICE .
i have got to use a loop ,mainly on WSJTX at abot15-20or wirg the amp up to 50 watts. I am aware of the intenceRF feilds and health hasards,ah profesor M Underhill.any opinions as to what a need to do 80-30mtr band and a big VAC Capacitor probably from Ukraine ,wish i could have a loop for Topband. any thoughts to a loop beginner

11234. Re: [loopantennas] hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-23 18:19:43 UTC
From: Richard (Rick) Karlquist
Topic: 11233 Message: 11234

It is very straightforward to calculate the bandwidth
vs size of a lossless loop (100% efficiency). To get
a usable bandwidth, meaning a percent or so, the loop
has to be between 1/8 and 1/4 wavelength in circumference.
(Above 1/4 wavelength, the "loop" acts as a shortened
and bent dipole).

If some professor did manage to make a high efficiency
loop that was below 1/8 wavelength, its bandwidth would
be so small as to be impractical.

On top band, 1/8 wavelength is 70 feet.

If you want to work top band and you live in an apartment,
put a big screwdriver antenna on a pickup truck and run
a kW mobile. KH6DX/W6 has achieved DXCC on 160 meters MOBILE.

Rick N6RK

On 11/23/2015 5:39 AM, jonathanwhite143@... [loopantennas] wrote:
> a few tears ago,a profesor from an English univrtsity,due to my
> epilepsy/bipolar .I cant think of his nam.
>
> now the question ;DO THERE LOOPS WORK IN ORACTICE .
>
> i have got to use a loop ,mainly on WSJTX at abot15-20or wirg the amp up
> to 50 watts. I am aware of the intenceRF feilds and health hasards,ah
> profesor M Underhill.any opinions as to what a need to do 80-30mtr band
> and a big VAC Capacitor probably from Ukraine ,wish i could have a loop
> for Topband. any thoughts to a loop beginner
>
>

11235. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-23 22:20:43 UTC
From: dj_philonline@...
Topic: 11233 Message: 11235

Being a loop user myself 40-10 meter bands (working on an 80m loop now like the one shown here Amateur Radio -- Antennas -- Mag Loops http://www.slscope.co.uk/amateur_radio/amateur_radio_antennas/amateur_radio_antennas_mag_loops.html

http://www.slscope.co.uk/amateur_radio/amateur_radio_antennas/amateur_radio_antennas_mag_loops.html

Amateur Radio -- Antennas -- Mag Loops http://www.slscope.co.uk/amateur_radio/amateur_radio_antennas/amateur_radio_antennas_mag_loops.html Designing Mag Loop Antennas: Unlike simple dipole antennas, mag loops can be made to operate over quite wide frequency ranges.

View on www.slscope.co.uk http://www.slscope.co.uk/amateur_radio/amateur_radio_antennas/amateur_radio_antennas_mag_loops.html
Preview by Yahoo

) I can not say I have ever seen or heard of a high efficiency magnetic loop not to say such a thing cant or doesnt exist but my reason for using a loop is probably the most usual one which is antenna restrictions therefore I use a small tuned magnetic loop antenna which means it is normaly 0.1 of a wavelength in size, in fact my main loop is a 26inch aluminium bicycle wheel rim which does give me reasonable results, compare this to no results without an antenna I think its good even though the efficency is a trade off.
I was recently told about a very large magnetic loop made from a bent and welded scafolding pole on a wooden stand of some sort? which was used on 80m with a capacitor made from two large metal oil can cylinders, this loop was reported to be very good although very heavy and the capacitor had long degraded, I expressed an interest and was told it was stored in a garage somewhere and it would be collected but nothing yet? fingers crossed it comes my way.
Phil 2E0TMI

11236. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-24 12:30:59 UTC
From: jwin95@...
Topic: 11233 Message: 11236

I am noticing the respondents in this thread do not mention the accomplishment anda narration of VK4AMZ
on this subject, as documented here:

Loop Page 1 http://www.brisdance.com/vk4amz/LOOP.html

http://www.brisdance.com/vk4amz/LOOP.html

Loop Page 1 http://www.brisdance.com/vk4amz/LOOP.html Amateur Radio Homebrew Projects and Information

View on www.brisdance.com http://www.brisdance.com/vk4amz/LOOP.html
Preview by Yahoo

Take a day or two, or a whole week and read and comprehend the WHOLE
thing would be my recommendation.

73,

Jim

11237. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-28 14:15:55 UTC
From: alienrelics@...
Topic: 11233 Message: 11237

That is definitely a lot of information to digest. Thanks for sharing!

I think he meant "brazed" the joints, unless he "braised" them on a BBQ. Chuckle.

Steve Greenfield AE7HD

11238. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-28 20:36:02 UTC
From: Richard (Rick) Karlquist
Topic: 11233 Message: 11238

Yes, I posted without reading the article. I said basically that you can make a high efficiency loop if you want to go to enough trouble, but it needs to be bigger than 1/8 wavelength and preferably 1/4 wavelength in circumference, but it will be quite narrowband. 1/8 wavelength is quite large on 160 meters.

I have now read the article. The article essentially said the same thing I said. The loop constructed was very large, certain not something you can set up indoors.

The rest of the article was a lot of anecdotal testimonial that nowhere gives a number for efficiency. The 0.2% bandwidth is at least consistent with high efficiency. (If you don't have narrow bandwidth in a loop, you cannot have high efficiency).

It is important to understand that none of this success with large loops will translate to smaller loops.

An additional comment I would make is that these LARGE LOOPS ARE NOT MAGNETIC LOOPS! They are shortened dipoles bent into a circle and fed at the ends. The current around the loop is not uniform due to the size. The fields are not pure H fields. Also, the polarization is not pure vertical. Doesn't mean they won't work, but they are different breed than a true magnetic loop. Thus we see that no true magnetic loop is any good as a transmit antenna. (Yes, you can get on the air with it if you have nothing else, but your signal will be weak).

Rick N6RK

11239. Quadrifilar Loop for AO85

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-28 15:06:29 UTC
From: Bob Cutter
Topic: 11239 Message: 11239

Perhaps a bit off topic but I have built one on 430 and 2M and so far have had a half dozen Q's on the bird.

Frankly, I and others did not expect it to work so well, it does not work as well, being omnidirectional, as a Yagi but impressive.

This is the basic article I used.

http://uuki.kapsi.fi/qha.html

72, Bob KIØG

11240. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-29 13:13:02 UTC
From: JW
Topic: 11233 Message: 11240

Rick N6RK writes:
- - - - - - - - - - - - - Thus we see that no true magnetic loop is any good as a transmit antenna. (Yes, you can get on the air with it if you have nothing else, but your signal will be weak).

Rick N6RK
- - - - - - - - - - - -

Rick,
I am reckoning that perhaps you may have less practical experience orlittle actual performance data in regards to some of these loop antennas outside of perhaps the construction of a few small loops for indoor use.
VK4AMZ describes, in human understandable terms, his experience with his antenna, which is a 1/4, 1/8, 1/16 WL cir. design for the 40, 80, 160 meter bands respectively. Noteworthy in his article are the pitfalls of loop construction that some people may make, such as using poor quality materials such as lossy ceramic 'doorknob' capacitors or poor workmanship on the construction (e.g. bolted vs brazed electrical connections.)
For a more objective analysis, I invite you to review my WSPR reports or 'spots' on 160 meters made using a 1/4 wave tuned loop to stations across the US and the world from my city-lot backyard. A comparison of my signal SNR at distant stations can be made with a station off to my east, KD6RF who also operates 160 meter WSPR nightly. Signal report databases going back several years can be downloaded for inspection and review.
I would also like to try and make contact with you some evening on
160 meters on 1900 kHz for a practical demonstration. That goes for anyone else, too. I also often check into the 1910 kHz morning net in Texas, Oklahoma and Arkansas, with very good results,
For the previous two years I have checked into the 160 meter weather net on 1995 kHz without issue using only 100 Watts from the Dallas, Texas area. The bulk of the members of this bet are north of Arkansas and Oklahoma. The usual Net controls in Kansas and Nebraska have been able to 'copy' my reports. I have now migrated to the use of an amplifier (as most stations on 160 use them) and I get complimentary reports on my signal.
I and probably a lot of others are also interested in the 'first principles'in physics that would be the determining factor in establishing the cutoff point for efficiency in antennas aside from what we already know about conductor skin resistance and capacitor dielectric loss whichaffect loop antenna efficiency directly. Mike Underhill has looked at thisissue extensively BTW and does not make quite the same claims as you make.
Regards,
Jim WB5WPA

11241. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-29 15:33:14 UTC
From: georgec@...
Topic: 11233 Message: 11241

Jonathan,

search the QST archives for June 1986, a construction article by Ted Hart, W5QJR about building magnetic loops. I built one back then and I have been a believer ever since. The capacitor and a method of remotely tuning it will be the difficult part. But these antennas work and work very well. I had the one I built in the attic for several years. But the remote tuning is a very important part. These will tune very "fast", meaning the angular increment in capacitor rotation will be a much larger then you'd imagine difference in frequency. But the antennas are very narrow band and very careful tuning is mandatory.

You'll also see many comments from those who get very distracted by theory and numbers. Pay them no attention. Build one. Enjoy it. I wouldn't worry at all about RF fields. 50 watts is nothing to speak of. In Magloop yahoo group you'll find Leigh VK5LT and his "white paper" on the subject. Believe what he writes, his information is very, very good. And very practical. AND he knows the theory very well. You'd be best served by joining the MagLoop group. "Loopantennas" seem to be more about receiving loops.

But these antennas do work exceptionally well. Can I tell you how many db difference to a dipole at 1/4 wave? No. And that doesn't matter one bit. The mag loop works. My first QSO from the 3' diameter loop on my book shelf manually tuned was a station in Japan on 40M CW with 100 watts. I am in Texas. He gave me the report 579. At that point who cares how many db difference or what the exact efficiency is?

BTW, 80-30 in one antenna may be impractical, as far as tuning range and capacitor are concerned.

Take care and good luck with the antenna.

GeorgeC
W2DB
Cedar Park, TX

11242. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-29 17:07:34 UTC
From: Richard (Rick) Karlquist
Topic: 11233 Message: 11242

On 11/29/2015 5:13 AM, JW jwin95@... [loopantennas] wrote:

>
> For a more objective analysis, I invite you to review my WSPR reports or
> 'spots' on 160 meters made using a 1/4 wave tuned loop to stations across

> Jim WB5WPA
>

Just so we know what we are talking about, does your
loop lie in a vertical plane or a horizontal plane.
If the latter, how high is it?

Rick N6RK

11243. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-29 17:35:34 UTC
From: Richard (Rick) Karlquist
Topic: 11233 Message: 11243

On 11/29/2015 7:33 AM, georgec@... [loopantennas] wrote:

> bit. The mag loop works. My first QSO from the 3' diameter loop on my
> book shelf manually tuned was a station in Japan on 40M CW with 100
> watts. I am in Texas. He gave me the report 579. At that point who cares
> how many db difference or what the exact efficiency is?

Glad you are having fun with your loop. This morning in the DX
contest, many signals from Asia were 40 dB over S9 on a calibrated
S meter. Compared to that, S7 is nothing remarkable. Your
loop with 1/14 wavelength circumference is at the upper end
of true magnetic loops (1/10 wl max). You are probably
several S-units down from a non-compromise ground plane. Maybe
you don't care about that disadvantage, but many ops do.
In a contest, you would really notice it.

I can easily work JA on 40m phone from my mobile station.
What does that prove?

Rick N6RK

11244. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-30 12:08:35 UTC
From: k4hkx@...
Topic: 11233 Message: 11244

For anyone interested. Section 6 on my QRz.com page contains a table of objective measurement results between 3 different magnetic loops and my reference dipole. The bottom line is that a well constructed loop using large diameter copper pipe performs at about one S-unit down from the dipole at half wavelength height. Quite respectable performance for a 5 ft diameter loop at 10 ft above ground.

Paul, K4HKX

11245. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-30 16:10:35 UTC
From: Richard (Rick) Karlquist
Topic: 11233 Message: 11245

Nice work on the 40 meter loop, but with a perimeter
of about 1/8 wavelength, I would quarrel with the
description "magloop". With the bandwidth well under
1%, you very well could have fairly good efficiency.
You might have been able to get similar results if
you just put a 13 foot high screwdriver antenna on
your car, at a lot less cost and effort.

Rick N6RK

On 11/30/2015 4:08 AM, k4hkx@... [loopantennas] wrote:
> For anyone interested. Section 6 on my QRz.com page contains a table of
> objective measurement results between 3 different magnetic loops and my
> reference dipole. The bottom line is that a well constructed loop using
> large diameter copper pipe performs at about one S-unit down from the
> dipole at half wavelength height. Quite respectable performance for a 5
> ft diameter loop at 10 ft above ground.
>
> Paul, K4HKX
>
>

11246. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-30 21:02:58 UTC
From: rmckee1957@...
Topic: 11233 Message: 11246

Thus we see that no true magnetic loop is any good as a
transmit antenna. (Yes, you can get on the air with it if
you have nothing else, but your signal will be weak). <snip>

Oh no ! Now I have to void out all the DX contacts I made with great signal reports on 20 meters made with my 2.5' diameter loop - DARN IT ! ;-)
KC8AON

11247. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-30 21:44:18 UTC
From: Richard (Rick) Karlquist
Topic: 11233 Message: 11247

On 11/30/2015 1:02 PM, rmckee1957@... [loopantennas] wrote:
> Thus we see that no true magnetic loop is any good as a
> transmit antenna. (Yes, you can get on the air with it if
> you have nothing else, but your signal will be weak). <snip>
>
> Oh no ! Now I have to void out all the DX contacts I made with great
> signal reports on 20 meters made with my 2.5' diameter loop - D! ARN IT
> ! ;-)
>
> KC8AON

No, you just need to stop referring to it as a true magnetic loop. At nearly 1/8 wavelength, it is too large to qualify. That's my point. As the size of the loop is increased, it starts to work (albeit with narrow bandwidth) at about the size where it has outgrown the true magnetic loop category.

Why does it matter whether a loop is magnetic as long as it gets out to whatever extent? The reason is that when a loop gets sufficiently large, it can be replaced by a Moxon bent dipole using the same amount of wire, so as to fit in basically the same space. Since this uses wire, not copper pipe, it is much cheaper and easier to build. You do need a loading coil for this bent dipole, but I submit that is a lot easier to build than a big loop made out of pipe. You also don't need a vacuum variable to tune.

Rick N6RK

11248. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-30 22:47:45 UTC
From: rmckee1957@...
Topic: 11233 Message: 11248

Why does it matter whether a loop is magnetic as long as it gets out to whatever extent? The reason is that when a loop gets sufficiently large, it can be replaced by a Moxon bent dipole using the same amount of wire, so as to fit in basically the same space. Since this uses wire, not copper pipe, it is much cheaper and easier to build. You do need a loading coil for this bent dipole, but I submit that is a lot easier to build than a big loop made out of pipe. You also don't need a vacuum variable to tune.

Well, my loop has about 7' of 1/2 inch soft copper tubing in it which is smaller than 1/8 wave, it doesn't have a vacuum variable on it either. It uses a dual gang air variable cap on it that I tune by hand. It was very easy to build, I just bent the pipe around a metal drum to get the shape and then soldered the connections to the variable cap and then made a feedloop out solid #12 copper wire. Took me all of a half hour to build it. Regardless of what you call it, it still amazes me everything I make DX contacts with it using a little pipsqueak SW-20 qrp rig at 2 watts ! If its not a magloop, please tell me what it is.

KC8AON

11249. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-11-30 22:54:18 UTC
From: Richard (Rick) Karlquist
Topic: 11233 Message: 11249

On 11/30/2015 2:47 PM, rmckee1957@... [loopantennas] wrote:
> Well, my loop has about 7' of 1/2 inch soft copper tubing in it which is
> smaller than 1/8 wave, it doesn't have a vacuum variable on it either.

Still bigger than 1/10 wave, so it exceeds the generally recognized size
of a mag loop (some references use 1/12 wave).

> It uses a dual gang air variable cap on it that I tune by hand. It was

That will work if you only want to run 2 watts.

>> rig at 2 watts ! If its not a magloop, please tell me what it is.

It is a "large" loop. Not a magnetic loop.
>
> KC8AON
>
>

11250. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-01 13:32:58 UTC
From: rmckee1957@...
Topic: 11233 Message: 11250

Still bigger than 1/10 wave, so it exceeds the generally recognized size
of a mag loop (some references use 1/12 wave). <snip>

So now its changed ? It was 1/8 wave, now its 1/10 or 1/12 ? Hmmmm ?

> It uses a dual gang air variable cap on it that I tune by hand. It was

That will work if you only want to run 2 watts. <snip>

It will work with 100 watts if the plate spacing on the cap is wide enough

>> rig at 2 watts ! If its not a magloop, please tell me what it is.

It is a "large" loop. Not a magnetic loop. <snip>

Large compared to what ? A full wave loop on 20 would be about 16' square and a halfwave dipole is about 32' long and you call a 2.5' diameter loop "large" - interesting ! None the less, it works and works quite well and it fits in the back of my car and sets up in about a minute with no assembly required.

GOOD NUFF FOR ME !

KC8AON

11251. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-01 14:25:10 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11251

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11252. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-01 14:25:10 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11252

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11253. Re: [loopantennas] Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-01 17:25:30 UTC
From: winston376@...
Topic: 11233 Message: 11253

Looks like amperes law and maxwell's equations don't work when applied to Amateur Radio loops whether they're 'small' or otherwise 'full size'.

A

11254. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-01 22:13:43 UTC
From: Robert Cavanaugh
Topic: 11233 Message: 11254

Hi Rick,Can you please cite your sources? My understanding from doing a lot of reading is that an antenna can be considered a magnetic loop antenna with a loop anywhere from about 1/10 to 1/4 lambda. The loop operates as a parallel tuned LC circuit. The tuning range is determined both by the variable capacitor size and the loop size. The practical range is limited on the high side by the self-resonant point of the loop (calculated from the inductance and self-capacitance) and the low side by the bandwidth. I would not want to design a loop that had a bw of less than 3 KHz, otherwise not very useful for SSB. After about 1/4 lambda the loop acts more like a balanced dipole, but this description is referring more to the radiation pattern. A STL has null points that a dipole does not. Further, I was under the impression that a Moxon is actually a 2-element beam antenna. Balanced I will accept, but isn't saying a Moxon is a dipole like calling a Yagi a dipole? Also, a Moxon is not multiband, where a STL can give very good performance over several bands.
This looks like the start of a very good discussion and I look forward to your response
73,Bob CavanaughAG6YK

11255. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-01 22:28:31 UTC
From: rmckee1957@...
Topic: 11233 Message: 11255

> It uses a dual gang air variable cap on it that I tune by hand. It was

That will work if you only want to run 2 watts. <snip>

It will work at 100 watts if the spacing between the plates on the cap are wide enough so as not to arch over when transmitting !

>> rig at 2 watts ! If its not a magloop, please tell me what it is. <snip>

Loop, large loop, magnetic loop, small transmitting loop, whatever its called, who really cares as long is works and works well. In fact, my little junkbox copper pipe thrown together in a hurry thingamajig loop works just as good as a halfwave dipole and it will do that while sitting about 3 feet off the ground and I don't need trees to hang it from !

11256. Halo

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-01 22:59:19 UTC
From: Will
Topic: 11256 Message: 11256

Hi All,

This discussion as to what sort of loop is a loop reminded me that way back around 1970 in UK I used a Halo as 2m mobile a/e. It worked well as mobile a/e for back in those days, clamped to car gutter so no holes in work owned vehicle. The halo was about a foot off the vehicle roof. I don't recall that there was specific spacing Converted Pye Reporters and other similar things. Often from Garex.

Now it is loop, well it was circular. Tuned by capacitance between ends. Fed with gamma match. From memory it was some thing like 12 or 15 inches across. That makes circumference about 1/2 wave, in other words a dipole bent into a circle.

Now is that a loop or not?

Cheers,
Will,
ZL1TAO

11257. Re: hi efficiency loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-02 14:54:01 UTC
From: georgec@...
Topic: 11233 Message: 11257

Exactly! Too many people hung up on specs and theory and not enough building and enjoying. The antenna doesn't know that it's not a magnetic loop by some definition. Go to Home Depot, buy some copper, build an antenna. Pretty much what I did (ok, add big-arsed capacitor and Hurst stepper to control it) And enjoy it.

Need to lighten up...it's a hobby...

GeorgeC
W2DB

11258. skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-12 03:51:49 UTC
From: verstelle@...
Topic: 11258 Message: 11258

Hello everyone, well I have been using a 43' vertical at the home QTH and decided to put up a horizontal loop over the house. I have read many great things like how quite they are. So I put up a 40 meter full wave loop about 145'.

So I installed the loop and put a 4:1 balun on it and sweeped it for SWR and it was a little off but close. I have never used Ladder line so decided to try it and that is when things went bad. There was no dip at 40 meters at all and the rig tuner cant tune it. my I has a dip at 15mhz, 20mhz and 32mhz.
I had read that ladder line can have a issue at some lengths so I spliced on 10 more feet but still weird results. I removed the ladder line and put the 4:1 balun back on and used coax again, and now my antenna is back to normal with good swr on 40,20,15 and 10meters.

Now I was hoping it would be better than my 43' vertical but the loop is noisier than the vertical and some signals are a little better on the loop and some are better on the vertical. in most cases the vertical is a better antenna.

I really thought a horizontal antenna would be quieter so i'm a bit disappointed. Anyone else have this kind of experience?

I'm wanting to get a better antenna up but because of cc&r's I don't want to push it with a tower and a yagi. I have never had great results with a ground mounted vertical and during the California QSO party I struggled to get over 100 contacts when others in the local area were getting contacts left and right.

right now i'm up about 25' and I could go up another 5' but doubt that would make a big difference. Also I'm feeding it about 2 feet from a corner, it is in a square configuration. Would changing the feed point make any differences?

Just trying to come up with some ideas before I take it down and try something else.
thanks,
Bill N7OQ

11259. Re: [loopantennas] skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-15 20:38:04 UTC
From: Richard (Rick) Karlquist
Topic: 11258 Message: 11259

On 12/11/2015 7:51 PM, verstelle@... [loopantennas] wrote:
> Hello everyone, well I have been using a 43' vertical at the home QTH
> and decided to put up a horizontal loop over the house. I have read many
> great things like how quite they are. So I put up a 40 meter full wave
> loop about 145'.
>
> right now i'm up about 25' and I could go up another 5' but doubt that
> Bill N7OQ

Even if we disregard the weird pattern of a loop 4 wavelengths long on 10 meters, etc., and the feedline decoupling issue, your height of 25 feet is just too low for horizontal polarization on the bands below 15 meters (and it isn't great even on 10 and 15 meters). If you have to be close to the ground, you must use vertical polarization.

I am assuming your 43 foot vertical is just a plain vertical (without traps, etc). There is no magic in the number 43 that is going to make the same height work right on 40,20,15, and 10 meters. I recommend you replace it with a BigIR vertical elevated 10 or 15 feet and install two elevated 1/4 wavelength radials per band. Your total height will be about the same 43 feet, it will just work a lot better. You could also use a trapped vertical, etc.

Rick N6RK

11260. Re: [loopantennas] skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-16 02:30:20 UTC
From: Andy
Topic: 11258 Message: 11260

Actually, a moderately low horizontal loop is not necessarily a bad performer. It'll tend to be a cloud burner -- a.k.a. NVIS -- on the lower frequencies so don't expect the greatest DX from it. If you could raise it about 50% more it would be considered high, and better for DX on 40m. It's probably a little too high already for 20m.

One potential problem, though, is that it is so close to your house. You mounted it over your house, right? So it's picking up the noise from all the electrical circuits in the house. (That, and the house wiring probably acts as a messy reflector too.)

There's also the chance that it has a bad connection, causing both the poor performance and lousy SWR.

It is not always true that a loop is quieter. I don't know why ... except for faults, or things that unbalance the loop. But it happens.

The nice thing about ladderline is that it tolerates large SWR with less loss than the equivalent situation with coax. But if the SWR on the feedline is big, then it (either ladderline or coax) has the potential to transform the impedance into something so far removed from what the antenna matcher "wants" to see, that it can't handle it. If the loop's feedpoint is around 100 ohms and you use a wide ladderline that is about 600 ohms and it happens to be a quarter wavelength long, it would transform the impedance up to 3600 ohms. That's an SWR of 72:1 in a 50 ohm system, or 18:1 if your antenna matcher uses a 4:1 balun at its output. A theoretically better situation might be to use a half wavelength long ladderline.

If the SWR you measure with coax (without the benefit of the antenna matcher) is low already, then I think you shouldn't worry about the coax's loss.

If your 43' vertical hasn't got at least a few counterpoise wires or radials, then adding them would probably make that antenna get out better.

Andy

11261. Re: [loopantennas] skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-16 07:29:11 UTC
From: Bill Verstelle
Topic: 11258 Message: 11261

Hi guys well it took so long for this message to post I went to qrz and have fixed my problems. First I was to close to a metal chimney less than a foot from it and it is metal all the way to my fireplace. So I replaced the poles and now I'm up to about 35' and now it works really good. It works better than the vertical in most cases but not all the time. I understand a horizontal loop has a feed point of about 100 ohms so the 600 ohm ladder line might not be the best choose maybe 450 or 300 would be better. But my feed point is right above my shack and I'm using 50' of rg8 and a 4:1 balun. I'm going to wind a 1:1 balun and try that instead of the 4:1. My swr' are 2:1 on 40, 1.3:1 on 20 and 1.4:1 on 15 and 10.

My 43' vertical has over 20 buried radials and it is still quieter than the loop. I plan on adding more radials if I decide to keep this antenna. We had a storm with 50 mph winds and the loop had no problem at all so I may put it up another 5'.

What really surprises me is my magnetic loop I built to use with the RV, it sometimes beats the vertical and most of the time it is as good and it is only a few feet above the ground. I plan on building another one for 20 and 40 meters the 2 bands I use the most and I will only put up the 3' loop when the upper bands are open.
73 Bill N7OQ

Sent from my iPad

> On Dec 15, 2015, at 6:30 PM, Andy ai.egrps@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Actually, a moderately low horizontal loop is not necessarily a bad performer. It'll tend to be a cloud burner -- a.k.a. NVIS -- on the lower frequencies so don't expect the greatest DX from it. If you could raise it about 50% more it would be considered high, and better for DX on 40m. It's probably a little too high already for 20m.
>
> One potential problem, though, is that it is so close to your house. You mounted it over your house, right? So it's picking up the noise from all the electrical circuits in the house. (That, and the house wiring probably acts as a messy reflector too.)
>
> There's also the chance that it has a bad connection, causing both the poor performance and lousy SWR.
>
> It is not always true that a loop is quieter. I don't know why ... except for faults, or things that unbalance the loop. But it happens.
>
> The nice thing about ladderline is that it tolerates large SWR with less loss than the equivalent situation with coax. But if the SWR on the feedline is big, then it (either ladderline or coax) has the potential to transform the impedance into something so far removed from what the antenna matcher "wants" to see, that it can't handle it. If the loop's feedpoint is around 100 ohms and you use a wide ladderline that is about 600 ohms and it happens to be a quarter wavelength long, it would transform the impedance up to 3600 ohms. That's an SWR of 72:1 in a 50 ohm system, or 18:1 if your antenna matcher uses a 4:1

balun at its output. A theoretically better situation might be to use a half wavelength long ladderline.
>
> If the SWR you measure with coax (without the benefit of the antenna matcher) is low already, then I think you shouldn't worry about the coax's loss.
>
> If your 43' vertical hasn't got at least a few counterpoise wires or radials, then adding them would probably make that antenna get out better.
>
> Andy
>
>
>

11262. Re: skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-19 14:59:57 UTC
From: Marcus NX5MK
Topic: 11258 Message: 11262

Dear Bill,

Thank you for your feedback on what worked and what did not work for you! Question: how have you secured the poles to stay upright (which base do you use?) and what kind of poles do you use? Any weblinks to the items would be appreciated as I've contemplated similar setup as you describe but just can't work out how to keep the poles from falling over :)) I should say that I have many trees here which off and on drop some large twigs which I fear will tangle with wire and bring everything down... Thank you in advance!

73 de Marcus NX5MK
Apparare Scientior Paratus Communicare

11263. Re: Large Indoor AM Broadcast Receiving Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-19 19:56:30 UTC
From: rivoltaperenne@...
Topic: 11214 Message: 11263

Math correct, but an antenna with a condenser it's a resonant antenna and with an highest Q, so you must consider Q factor effect as usual.

11264. Re: skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-19 19:33:30 UTC
From: n40cla@...
Topic: 11258 Message: 11264

Marcus

Poles really are not necessary. Go to WalMart and buy a $7 sling shot, some 3/4oz lead weights, a zebco fishing spinner reel, and a spool of 15lb test fish line and shoot into the trees. I did that and my 80mtr loop is up about 80 feet. Yes you are going to miss a couple of times, and you may have to sacrifice some line and maybe a weight or two to the tree gods, but it is fun and a good experience. You also do not have to have the loop absolutely square. Mine is 277Feet long and has 4 unequal sides and I get about a 1.5vswr on all the regular bands, 80, 40, 20, 15,and 10 not the Warc bands and I feed mine in one of the corners with a 100ft roll of RadioShack 300ohm line to a 4:1 balun at the window of the shack and about 10 feet of coax to the radio. No tuner needed. I used the plastic insulators from Home depot and purchased a 1000ft roll of parachute cord for hanging the insulators from the trees.

Fred - N4CLA

11265. Re: [loopantennas] Re: skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-20 01:41:53 UTC
From: John
Topic: 11258 Message: 11265

Naw, slingshots are old tech. Use a quadcopter.

John KK6IL

On 12/19/2015 11:33 AM, n40cla@... [loopantennas] wrote:
>
>
> Marcus
>
> Poles really are not necessary. Go to WalMart and buy a $7 sling shot,
> some 3/4oz lead weights, a zebco fishing spinner reel, and a spool of
> 15lb test fish line and shoot into the trees. I did that and my 80mtr
>

11266. Re: [loopantennas] Re: skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-20 04:02:03 UTC
From: n40cla@...
Topic: 11258 Message: 11266

Well the problem with Quad copters is that they dont fly through the trees very well. I like to hang the ropes in a tree branch crotch. they are not way up in the skimpy tree branches. Anyway it was a suggestion and this is a lot cheaper than the poles.

Fred - N4CLA

11267. Re: skywire loop install issues

Yahoo group: loopantennas (2013 — 2017)
Date: 2015-12-21 03:08:57 UTC
From: Marcus NX5MK
Topic: 11258 Message: 11267

Dear OMs,

Thank you for your replies directly to me as well as via the group! My problem is that trees are either too close to hang wire up far enough away, or too far away (at two corners of the quadrangle) to make it happen. I will thus have to use poles by necessity :(

Again, thank you for your replies and Merry Christmas!

73 de Marcus

11268. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-01 14:02:14 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11268

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11269. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-01 14:02:15 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11269

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11270. Recommendation for Loop Tuner

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-16 07:14:57 UTC
From: TomSwango@...
Topic: 11270 Message: 11270

I would like recommendation for a automatic loop tuner for hf bands 100 watts would be nice but not required.

Also is a loop tuner different from a regular random wire tuner or do tuners tuner what ever is connected to them

thank you
Tom

11271. Longwave Portable loop design?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-21 22:40:24 UTC
From: g790x@...
Topic: 11271 Message: 11271

Hi,
A total beginners question! Apologies in advance!
I'd like to build a portable tuneable LW loop for approx 150kHz to 280kHz - something similar to the Tecsun AN-200 which I have but is MW only - for inductive coupling to the radio's ferrite rod.

Is this possible with a loop diameter of 30-45cm (18inches) or pointless with such a small loop diameter?
If so, approx how many windings? I had a look at this online calculator which suggest approx 30 turns...
http://www.angelfire.com/mb/amandx/loop.html

Should the windings be side-by-side / spaced?

Can the Tecsun AN-200 be (easily!) modified for longwave?

Parts I have for a build:
- a (1970's) two gang air variable cap (approx 100pF-800pF total)
- enameled wire (0.6mm / SWG 23 / AWG 22)

Many thanks!

11272. Re: Recommendation for Loop Tuner

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-23 16:11:17 UTC
From: Marcus NX5MK
Topic: 11270 Message: 11272

Hi Tom,

For full wave horizontal loops, I've had great success with the SGC line of tuners.

73 de Marcus NX5MK
Apparare Scientior Paratus Communicare

11273. Re: Recommendation for Loop Tuner

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-23 18:10:23 UTC
From: winston376@...
Topic: 11270 Message: 11273

Tom,

I built a 2 element horizontal directly phased loop beam interfaced with a remote SGC 239 Smartuner several months ago. The antenna is cut for 15 meters and is at approximately 25 feet above ground. The tuner easily matches the antenna on all ham bands 10 through 80 meters. Obviously, the effective transmitted field strength suffers at the lower frequencies since the antenna is physically smaller than the design frequency, however, based on Reverse Beacon Network CW tests over an extended period of time over several weeks, my received signal above the baseband floor at the receiving location, was as much as about 6 dB on 40 meters at about 1,000 miles, 15 dB at 10 MHz, and 10 to 15 dB at 20 meters. These were daytime or late afternoon report returns. From the Los Angeles area, these were receiver returns as far away as New Jersey, Puerto Rico, Hawaii and Venezuela as well as the mid section of the US. Applied power was about 90 watts.VSWR did not exceed 2:1 which is the design criteria maximum for the SGC tuner algorithm.

The SGC tuner takes 2 to 5 seconds to automatically adjust to a never used frequency and tune time is virtually unnoticeable when it has the frequency already in it's memory. 200 watts is the advertised power limit on this tuner.

I recommend this tuner.

As for your second question, you will find that there is a lot of controversial discussion regarding the term "tuner", "coupler" etc. From an EE standpoint, all of these terms/methodologies basically mean that the load impedance (antenna) is matched to the source impedance (transmitter) for maximum power transfer. There are practical limitations based on the specific design of the "impedance matching device" that you are using to interface to the antenna, whether it is a loop or a simple wire....but I think you get the gist of what I'm saying. You will not know if you get an impedance match until you hook it up and try it with your individual systems architecture.

Hope this helps.

Alex

11274. Re: [loopantennas] Re: Recommendation for Loop Tuner

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-23 23:31:24 UTC
From: Everett Sharp
Topic: 11270 Message: 11274

If there is an interest in a horizontal loop, I have an article posted in the files section on a 80 meter loop that works on all band 80 through 6 meters, with the exception on 60 meters and it is resonate in all of those bands. I am feeding it with coax, using a 4:1 current balun. My K3S built in antenna tuner allows coverage in all of the bands, including the WARC band, with the exception of 60 meters.

Everett N4CY
Sent from my iPad

> On Jan 23, 2016, at 10:11 AM, Marcus NX5MK nxfivemk@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Hi Tom,
>
> For full wave horizontal loops, I've had great success with the SGC line of tuners.
>
> 73 de Marcus NX5MK
> Apparare Scientior Paratus Communicare
>

11275. Re: [loopantennas] Re: Recommendation for Loop Tuner

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-29 15:05:18 UTC
From: farmerik@...
Topic: 11270 Message: 11275

Hi Everett et al - I am mostly interested in MW and wondered if any one ever laid out a horizontal loop on the ground like a BOG? I have room for a triangle with a circumference of 1,000 feet, maybe even 1500 feet in a lightly wooded, never mowed area. Lots of lightning strikes here and wildlife to tangle up in wires, so not so good for aerials.
-FARMERIK

11276. Re: [loopantennas] Re: Recommendation for Loop Tuner

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-29 19:31:33 UTC
From: Everett Sharp
Topic: 11270 Message: 11276

Hi Rik,
You may be asking about a Horizontal loop for receiving, based on the article I have posted in the files section. All I can say is my 275' is an excellent receiving antenna and might work well for you. Mine is strung through the trees in my back yard, so that could work for you. The additional length that you could run your should be even better. Al I can say is give it a try. You will need a 4:1 balun to match it to 50 ohms.

Everett N4CY

Sent from my iPad

> On Jan 29, 2016, at 9:05 AM, farmerik@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Hi Everett et al - I am mostly interested in MW and wondered if any one ever laid out a horizontal loop on the ground like a BOG? I have room for a triangle with a circumference of 1,000 feet, maybe even 1500 feet in a lightly wooded, never mowed area. Lots of lightning strikes here and wildlife to tangle up in wires, so not so good for aerials.
-FARMERIK
>
>

11277. Really strange-excellent ALA-1530 Loop Results recently!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-30 01:19:32 UTC
From: kb8nty@...
Topic: 11277 Message: 11277

Cant tell you for how long band conditions here in Ohio have been about the worse I have experienced.

I use a Mosley TA-33M-WARC, and Butternut HF9V vertical with about 125 ground radials or so.
By chance I switched over to my ALA-1530 Wellbrook loop and couldn't believe that bands which had nothing but atmospheric static now with using my loop signals just appeared right out of the noise!
This experience occurred on just about every band and or frequency...

My Wellbrook ALA-1530 allowed me to work the most recent DXpeditions, including a new one VP8STI which on 40 meters a switch to my ALA-1530 5' high loop brought this station completely out of the s-5 s-8 atmospheric static!

For some reason I hadn't been selecting my loop on my antenna switching recently and boy-wow am I glad I did!....

This occurrence seems to be so defining I mean honestly, from absolutely zero copy and pure static, with no sign of anything, and switching to the loop...she made stations appear right out of this horrible band noise!

Just wanted to share, possibly if you have Wellbrook loop or similar you just may share this same results!

So strange, and am sure it has to do with this unique bad propagation, by however the signals are coming in or something, as my loop never performed these unbelievable results, with normal conditions back before these recent super-poor conditions.

I mean I always have enjoyed the results of my ALA-1530, however using it together with these poor conditions have resulted in some true-pure-never experienced magic!

Just sharing...Give yours a try!...I sure hope the same for you!

-73-
http://www.rossradio.net/ http://www.rossradio.net/

11278. Kiwa MW Loop for sale - Domestic US Only

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-31 03:46:44 UTC
From: daiche@...
Topic: 11278 Message: 11278

I have a Kiwa loop for sale that is in great working shape. It would include the manual and a 50' extension cable for remote control of the loop. I really don't use it anymore with all my other antennas and SDR radios. You would provide your own 13.8V DC or AC power.

If there is any interest you can reach me at my email address 'daiche at yahoo dot com'.

Dave Aichelman N7NZH Grants Pass, Oregon

11279. Re: Really strange-excellent ALA-1530 Loop Results recently!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-30 23:57:03 UTC
From: geraldsteck@...
Topic: 11277 Message: 11279

i have noted something similar to your experience in the past few days--not quite as notable but definitely noticeable--got the Pixel loop here

11280. Re: [loopantennas] Re: Recommendation for Loop Tuner

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-01-31 20:44:13 UTC
From: farmerik@...
Topic: 11270 Message: 11280

From what I read Online even a 200-300 foot long wire on or near the ground acts like a BOG. By that I mean it picks up off the ends rather than the sides like a true aerial [elevated long wire antenna].

I have no idea what happens to the impedance as a single turn horizontal loop is moved from well above the earth to being close to it. Other things probably change as well. Since it is so much easier to lay a wire on the ground than attach it to trees or other supports, I am thinking about trying that. I will not be able to bury co-ax feed line until after the ground thaws. At the moment I am thinking a 1,000 foot perimeter equilateral triangle horizontil on the ground. A LOG antenna I guess [loop on ground]. That would fit on my lightly wooded land to one side of my house. Each side would be 333 feet, and the ends of each run would widen the pattern off each corner. I think it will be pretty omni directional, with minor nulls perpendicular to the middle of each leg. It is possible signals flowing around a triangular loop will cancel or be out of phase? I have no idea.

I figure if the wire does not work like that, I can roll it back up for some other more likely antenna design. I have spent hours looking for some one Online who has done this before. No luck so far, but I have to guess what anyone might call such an antenna. From what I have found, an aerial made as a horizontal loop is most omni directional as a triangle. That makes sense off the sides of each leg. For a BOG like pattern, the ends 60 degrees apart would spread the patterns off the corners to be pretty good 90 degrees wide covering 270 degrees toal with 3 nulls in between each 30 degrees wide but over lapping weakly based on Geometry, if there is no phase or cancellation effect, but that is just a guess.

-FARMERIK

11281. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-01 11:55:21 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11281

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11282. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-01 11:55:21 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11282

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11283. Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-19 12:46:11 UTC
From: f8dql@...
Topic: 11283 Message: 11283

Hello,
I am planning to build the Simple Varactor-Tuned Loop described by N7ZWY.
The documentation is quite clear, except for the T2 and T3 transformers.
I can read "Transformers T2 and T3 are both constructed with four turns of #30 AWG trifilar wire through the holes of a Fair-Rite 2843002402 binocular core. Fig. 6 and Fig. " but both Fig 6 and 7 show a bifilar winding, not a trifilar.
Could someone help me to undesrtand how T2 and T3 are made?

Plus, would this antenne be more efficient with multi-turns 1 meter (3 feet) loop?

Thanks for your help, 73

11284. Re: [loopantennas] Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-20 21:53:17 UTC
From: Chris Trask
Topic: 11283 Message: 11284

>
> Hello,
> I am planning to build the Simple Varactor-Tuned Loop described by N7ZWY.
> The documentation is quite clear, except for the T2 and T3 transformers.
> I can read "Transformers T2 and T3 are both constructed with four turns
> of #30 AWG trifilar wire through the holes of a Fair-Rite 2843002402
> binocular core. Fig. 6 and Fig. " but both Fig 6 and 7 show a bifilar
> winding, not a trifilar.
> Could someone help me to undesrtand how T2 and T3 are made?
>

If you look closely at the figures by enlarging them in your PDF viewer you can see that I used shading to illustrate how the three wires are interconnected. I might have been better if I had used a coarser setting when I filled those.

>
> Plus, would this antenne be more efficient with multi-turns 1 meter
> (3 feet) loop?
>

No. The induced losses increase with multiple turns. To improve the efficiency you need to use larger tubing, such as 1-inch copper pipe. To ben it you need one of those expensive Harbor Freight tubing benders.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11285. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-21 15:12:37 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11285

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /F8DQL/t2.png
Uploaded by : f8dql <f8dql@...>
Description : T2 for Mag Loop

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2.png

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

f8dql <f8dql@...>

11286. Re: [loopantennas] Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-21 15:14:56 UTC
From: f8dql@...
Topic: 11283 Message: 11286

Hello Chris, Thanks a lot for your answer.
Would you please have a look at this file:
Loop Antenna News and Information Forum
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2.png

https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2.png

Loop Antenna News and Information Forum
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2.png This is the Loop Antenna Group to Ask Your Questions, Get Answers and Information about Loop Antennas for improved your Radio Listening and En...

View on groups.yahoo.com
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2.png
Preview by Yahoo

This is the T2 winding magnified, I can't even see how is it built with trifilar.
73

11287. Re: [loopantennas] Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-21 21:29:54 UTC
From: Chris Trask
Topic: 11283 Message: 11287

>
>Hello Chris, Thanks a lot for your answer.
>Would you please have a look at this file:
>Loop Antenna News and Information Forum
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2.png
>
> https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2.png
>
>This is the T2 winding magnified, I can't even see how is it built with trifilar.
>

You're saying that you cannot see the obvious three forms of shading that depict the three wires of the trifilar winding? That's as clear as you can possible get.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11288. Loop Antenna Tuners

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-22 01:42:20 UTC
From: TomSwango@...
Topic: 11288 Message: 11288

Do loop antenna need a special "loop anntenna" turner. I have an elecraft T1 but it does not say anything about tunning loops and I notice that some antenna tuners say loop tuners and some do not.
Thanks
Tom
W1TWS

11289. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-22 08:45:38 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11289

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /F8DQL/t2 colored.png
Uploaded by : f8dql <f8dql@...>
Description : T2, with colors

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2%20colored.png

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

f8dql <f8dql@...>

11290. Re: [loopantennas] Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-22 08:48:38 UTC
From: f8dql@...
Topic: 11283 Message: 11290

Got it !!! Sorry, my old eyes did not notice the shape difference.
I have added some colors for more clarity.

Loop Antenna News and Information Forum
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2%20colored.png

https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2%20colored.png

Loop Antenna News and Information Forum
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2%20colored.png This is the Loop Antenna Group to Ask Your Questions, Get Answers and Information about Loop Antennas for improved your Radio Listening and En...

View on groups.yahoo.com
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/t2%20colored.png
Preview by Yahoo

Thanks for your help Chris,
73

11291. Re: [loopantennas] Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-25 15:55:07 UTC
From: mrk_muller@...
Topic: 11283 Message: 11291

I am very glad you added the colors! I looked and looked, and even when I thought I'd figured it out, I got it wrong. The shading was extremely hard to figure out, even looking at the original paper. Thanks again for making this clear with color, F8DQL!

11292. Re: [loopantennas] Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-26 17:42:35 UTC
From: Schick, David
Topic: 11283 Message: 11292

Mr. Trask,

Would the varactor tuned loop be suitable for low power QRPp transmissions? I understand that significant voltages would develop across the varactor even at low power, but wouldn't you be able to fix that by using a higher-voltage varactor (to a certain power level)?

Dave

On Thu, Feb 25, 2016 at 8:55 AM, mrk_muller@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> I am very glad you added the colors! I looked and looked, and even when I
> thought I'd figured it out, I got it wrong. The shading was extremely hard
> to figure out, even looking at the original paper. Thanks again for making
> this clear with color, F8DQL!
>
>
>

11293. Re: Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-27 22:08:25 UTC
From: gregella53@...
Topic: 11283 Message: 11293

Dave,

I hope you and Chris don't mind me answering here. The capacitance of a varactor diode is determined by the reverse bias voltage across it. If you were transmitting with even a few milliwats of power and kept the RF voltage across the diodes below 20 volts, the RF sine wave would cause the capacitance, and thus the resonant frequency of the loop, to sweep at a rate equal to your transmit frequency. This would ruin the tuning effect, and the non linearity would probably also generate lots of harmonics.

Greg Ella
AD0JP

11294. Re: [loopantennas] Re: Simple Varactor-Tuned Loop by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-02-28 03:11:50 UTC
From: Schick, David
Topic: 11283 Message: 11294

Greg,

Thanks for the reply. I kinda suspected that was the case - I was wondering if it was possible to specify a diode that would make the RF sine wave voltage small compared to the DC biasing voltage. I realize that one would need to have a high voltage bias supply in that case.

Dave

On Sat, Feb 27, 2016 at 3:08 PM, gregella53@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Dave,
>
> I hope you and Chris don't mind me answering here. The capacitance of a
> varactor diode is determined by the reverse bias voltage across it. If you
> were transmitting with even a few milliwats of power and kept the RF
> voltage across the diodes below 20 volts, the RF sine wave would cause the
> capacitance, and thus the resonant frequency of the loop, to sweep at a
> rate equal to your transmit frequency. This would ruin the tuning effect,
> and the non linearity would probably also generate lots of harmonics.
>
> Greg Ella
> AD0JP
>
>
>

11295. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-01 12:17:50 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11295

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11296. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-01 12:17:50 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11296

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11297. Crystal radio spiderweb loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-01 20:13:03 UTC
From: Steve Greenfield
Topic: 11297 Message: 11297

I will be doing a crystal radio workshop, I'm toying with which design to use. This fits on a letter size sheet of paper.
https://groups.yahoo.com/neo/groups/loopantennas/photos/albums/952458711

If that link quits working, go to Photos and AE7HD.
Spiderweb coil, 100t of 24g enameled wire, measured at 1600uH. I plan on adding taps. I have some variable caps from Amazon, rated 20 to 126pF. What I measured on the cap is 11 to 195pF, and 15 to 87pF. Clearly I need a lot less than 1600uH to tune the AM radio band. So I expect to redo this spiderweb coil with a larger center. The idea here is to make a large tuned loop so that a longwire antenna is not required, at least for stronger stations.
I'm using the AADE LC meter.
Steve Greenfield AE7HD http://www.linkedin.com/in/stevenjgreenfield

11298. Re: Crystal radio spiderweb loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-01 22:08:20 UTC
From: alienrelics@...
Topic: 11297 Message: 11298

Oh, yeah, I know that was way too much. I used someone else's form and just wound until it was full and happened to end up at an even 100 turns. -Way- more than intended.

I downloaded a DXF from this thread, had to clean it up a bit:
http://theradioboard.com/rb/viewtopic.php?t=3413
http://theradioboard.com/rb/viewtopic.php?t=3413

Thanks for the calculations. I found this online calculator for spiderweb coils:
http://crystalradio.net/professorcoyle/professorcoylespiderweb.shtml
http://crystalradio.net/professorcoyle/professorcoylespiderweb.shtml

Steve Greenfield AE7HD http://www.linkedin.com/in/stevenjgreenfield

On Tuesday, March 1, 2016 1:38 PM, John Bruckner <jbruckner@cox.net> wrote:

Hello;

From what you state on your post, you have a dual (?) capacitor that when connected would be 26 to 282 pf. To tune the AM band, a coil of around 360Uh would tune 499-1645kHz according to the calculator. It was difficult to see what diameter former you were using, but 1600Uh is way too much.

John
W0HII
http://www.crystalradiocoils.com/ http://www.crystalradiocoils.com/

11299. Re: Crystal radio spiderweb loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-02 19:18:27 UTC
From: alienrelics@...
Topic: 11297 Message: 11299

I also found out that when I imported the DXF into CorelDraw, it blew it up to fit the page. So I ended up with a coil about 2x larger than intended.

I did some calculations on it, I'll just remake it with a larger center but still large. Then the center should be large enough to fit a home-made capacitor made from a couple of CDs.

Steve Greenfield AE7HD

---In loopantennas@yahoogroups.com, <alienrelics@yahoo.com> wrote :

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John
W0HII
http://www.crystalradiocoils.com/ http://www.crystalradiocoils.com/

11301. Re: [loopantennas] Remote Tuner & Remote Rotator for magnetic loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-11 03:14:02 UTC
From: Alan Hill
Topic: 11300 Message: 11301

It seems good but I think a 20 foot cable is somewhat short for everyday use.

On Mar 10, 2016 4:33 PM, "alexander.the.hard@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

>
>
> For various reasons, operating a magnetic loop at proximity is not always
> possible. The following unit might help to solve that issue.
>
>
>
> Chameleon Antenna Remote Tuner & Rotator for CHA F LOOP
> <https://www.youtube.com/watch?v=qR3IO-_tagU>
> [image: image] <https://www.youtube.com/watch?v=qR3IO-_tagU>
> Chameleon Antenna Remote Tuner & Rotator for CHA F...
> <https://www.youtube.com/watch?v=qR3IO-_tagU>
> This is the NEW CHA REMOTE ROTATOR & TUNER. PRICE IS $269.00 USD +
> SHIPPING For more info send us an email here: SUPPORT@CHAMELEONANT...
> View on www.youtube.com <https://www.youtube.com/watch?v=qR3IO-_tagU>
> Preview by Yahoo
>
>
>
> -C
>
>

11302. Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-12 17:47:12 UTC
From: ssedgwick@...
Topic: 11302 Message: 11302

A ham friend of mine, KE7JI told me about this loop antenna on ebay and I thought I would share the link with the group: http://www.ebay.com/itm/Military-Grade-HF-Loop-Antenna-/262322899549?hash=item3d13a9ca5d:g:ad0AAOSwyjBW3Kw~ http://www.ebay.com/itm/Military-Grade-HF-Loop-Antenna-/262322899549?hash=item3d13a9ca5d:g:ad0AAOSwyjBW3Kw~

Anyone know anything about this antenna?

Steve_WB8GRS

11303. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-14 20:53:18 UTC
From: Ben Hall
Topic: 11302 Message: 11303

On 3/12/2016 11:47 AM, ssedgwick@... [loopantennas] wrote:
> http://www.ebay.com/itm/Military-Grade-HF-Loop-Antenna-/262322899549?hash=item3d13a9ca5d
:g:ad0AAOSwyjBW3Kw~
>
> Anyone know anything about this antenna?

A couple of Google searches turned up this:

<http://www.antentop.org/004/files/star004.pdf>

Seems like they are (were?) a French company making military antennas
for vehicular use?

thanks much and 73,
ben, kd5byb

11304. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-14 21:01:32 UTC
From: Ben Hall
Topic: 11302 Message: 11304

On 3/12/2016 11:47 AM, ssedgwick@... [loopantennas] wrote:
> A ham friend of mine, KE7JI told me about this loop antenna on ebay and
> I thought I would share the link with the group:
> http://www.ebay.com/itm/Military-Grade-HF-Loop-Antenna-/262322899549?hash=item3d13a9ca5d
:g:ad0AAOSwyjBW3Kw~
>
>
> Anyone know anything about this antenna?

Possible that Starec stands for: "Societe Technique D'application Et De
Recherche Electronique"

<http://www.google.com/patents/EP0961346A1?cl=en>

Very interesting...

-ben, kd5byb

11305. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-15 04:34:10 UTC
From: Andy
Topic: 11302 Message: 11305

Somebody really wants this thing. The asking price was $1000; the first bid was for $2500! Wow.

Andy

11306. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-15 08:13:01 UTC
From: Jean-L. RAULT
Topic: 11302 Message: 11306

Hi all

I used to work with STAREC when I worked for THOMSON (a french defence systems compagny) a long time ago. STAREC was one of our subcontractors and supplied us with high quality and ruggerized HF, VHF, UHF and microwave antennas for Armes, Navies and Air Forces systems.
STAREC disappeared in 1998 when they joined RAYAN and CHELTON (COBHAM ANTENNAS nowadays).

I should still have some STAREC HF loops data sheets somewhere in my cellar (or in my shack ??). If you get the exact ref of the ebay STAREC loop, I'll be pleased to forward you the detailed spec.

Jean-Louis F6AGR

Le 14/03/2016 20:53, Ben Hall kd5byb@... [loopantennas] a écrit :
>
> On 3/12/2016 11:47 AM, ssedgwick@... [loopantennas] wrote:
> >
> http://www.ebay.com/itm/Military-Grade-HF-Loop-Antenna-/262322899549?hash=item3d13a9ca5d
:g:ad0AAOSwyjBW3Kw~
> >
> > Anyone know anything about this antenna?
>
> A couple of Google searches turned up this:
>
> <http://www.antentop.org/004/files/star004.pdf>
>
> Seems like they are (were?) a French company making military antennas
> for vehicular use?
>
> thanks much and 73,
> ben, kd5byb
>
>
> ---
>

11307. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-15 18:56:23 UTC
From: Andy
Topic: 11302 Message: 11307

It's now up to $3800.

I would say, "wow, this thing is hot!", except there are only two buyers, they are using automatic bids, and a few of them were out-bidding their own previous bids ... which doesn't make sense unless there is some sort of game going on.

Andy

11308. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-16 00:25:41 UTC
From: gnuarm.2007@...
Topic: 11302 Message: 11308

You have to understand how the automatic bidding works. It only records successful bids. If I bit $2500 but the current bid is $1000, it will show the lowest number needed to outbid $1000, say $1100. Then if someone else bids $1200, it will record *my* bid of $1300 and not the $1200 bid because it was not successful. If I keep upping the bid by $100, the recorded bids will continue to be the other guys bids, outpacing mine by the minimum each time until I finally bid enough to get above his highest bid. Only then will eBay record my bid.

In general, it is not a good idea to bid until the very end of the auction. Know what you are prepared to bid and wait until the last 30 seconds to bid. Then the other guy won't have time to think about how much to counter with and you may catch him flatfooted. By bidding early you just drive up the price giving the other bidders time to think and react.

Rick

---In loopantennas@yahoogroups.com, <ai.egrps@...> wrote :

It's now up to $3800.

I would say, "wow, this thing is hot!", except there are only two buyers, they are using automatic bids, and a few of them were out-bidding their own previous bids ... which doesn't make sense unless there is some sort of game going on.

Andy

11309. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-16 01:11:09 UTC
From: Andy
Topic: 11302 Message: 11309

Sorry, I'm not an ebay user ... and I don't understand what you wrote.

But what I think I am seeing (looking at all bids, including automatic), is a bidding war between two bidders, who are mostly just leap-frogging one another. I guess what's happening is that one guy's non-automatic bids are competing with the other guy's automatic bids.

In any event, it is now less than 24 hours left, and the highest offer is now up to $4250.

I still say "wow".

Andy

11310. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-16 04:08:11 UTC
From: Richard (Rick) Karlquist
Topic: 11302 Message: 11310

I wonder if one of the two bidders leap frogging is
actually a shill for the seller to jack up the
price?

Rick

On 3/15/2016 6:11 PM, Andy ai.egrps@... [loopantennas] wrote:
> Sorry, I'm not an ebay user ... and I don't understand what you wrote.
>
> But what I think I am seeing (looking at all bids, including automatic),
> is a bidding war between two bidders, who are mostly just leap-frogging
> one another. I guess what's happening is that one guy's non-automatic
> bids are competing with the other guy's automatic bids.
>
> In any event, it is now less than 24 hours left, and the highest offer
> is now up to $4250.
>
> I still say "wow".
>
> Andy
>
>
>

11311. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-16 06:06:26 UTC
From: Andy
Topic: 11302 Message: 11311

"I wonder if one of the two bidders leap frogging is
actually a shill for the seller to jack up the
price?"

Yes, that was my thought too.

Especially that first one, for $2500, waaay above the asking price.

Andy

11312. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-16 06:33:11 UTC
From: gnuarm.2007@...
Topic: 11302 Message: 11312

The bidding doesn't work that way. Starting price is $1000 and a***a bid $3200. The displayed bid would have only been $1000 until someone else bid against it. Then a***a's bid will show as the minimum over the other person's bid or in this case $2500. So 2***9 must have bid $2450 (the minimum bid seems to be $50). Then 2***9 bid $2700 raising a***a's bid to $2750, etc. 2***9 kept raising his bid a little at a time until he finally got above a***a's original bid of $3200 by bidding $3333.

Is that more clear? I expect the early $2500 bid was because 2***9 thought he was putting in a bid large enough to beat a***a and have some margin on top but a***a's original bid was still larger yet.

Read about incremental and automatic bidding...

Bidding overview http://pages.ebay.com/help/buy/bidding-overview.html

http://pages.ebay.com/help/buy/bidding-overview.html

Bidding overview http://pages.ebay.com/help/buy/bidding-overview.html

View on pages.ebay.com http://pages.ebay.com/help/buy/bidding-overview.html
Preview by Yahoo

Rick

11313. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-16 14:31:22 UTC
From: i7swx@...
Topic: 11302 Message: 11313

Hi Jean-Luis,

it would be interesting to see how the feedpoint was arranged, and the measures/size too.

From the picture it looks like the feed point would be double.

Can you please load the technical information on files?

Merci et a bientot

Gian
I7SWX

11314. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-16 16:58:33 UTC
From: Bill Verstelle
Topic: 11302 Message: 11314

I would also love to see the technical details of this antenna.

Sent from my iPad

> On Mar 16, 2016, at 7:31 AM, i7swx@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
>
> Hi Jean-Luis,
>
>
>
> it would be interesting to see how the feedpoint was arranged, and the measures/size too.
>
>
>
> From the picture it looks like the feed point would be double.
>
>
>
> Can you please load the technical information on files?
>
>
>
> Merci et a bientot
>
>
>
> Gian
>
> I7SWX
>
>

11315. Getting the Loop UP, sugguestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-15 11:32:50 UTC
From: fsurovec@...
Topic: 11315 Message: 11315

As soon as the weather clears (and it is starting to look pretty good out there!) I will be attempting to put up my 80 meter Skywire Loop antenna. As far as wire antennas go the only thing I have worked with was a 40 meter dipole..... not too much to worry about there! With about 270 feet of wire I was wondering if there was a technique to follow with respect to measuring, pulling wire thru insulators and secure way to attach the ladder line to the wire itself to help keep the strain off the feedline? They make that neat plastic "T" contraption for a G5RV and 450 ohm ladder line, but it would not work in this application because I made my own feedline AND the strain of all this wire would be too much for the plastic connector anyway. I am planning to have the antenna wire "float" thru insulators at four locations so that should be interesting. I just don't want to wind up with a bunch of kinked (14 gauge) wire around my feet and all over the yard! Any light that might be shed on this would be greatly appreciated. I will keep you posted as to my progress!

Francis, WA3GGV

11316. New Member test message

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-17 22:52:55 UTC
From: Leigh Turner
Topic: 11316 Message: 11316

Hi, I have just discovered and accordingly joined this loop antenna group.

I look forward to following the discussions and participation.

Kind regards
Leigh
VK5KLT
Adelaide, Australia

11317. Re: [loopantennas] Getting the Loop UP, sugguestions?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-17 23:16:12 UTC
From: Andy
Topic: 11315 Message: 11317

Don't you know, antennas work better and stay up longer when they are erected during bad weather?

Better get it done now, before spring comes!

:-)

Andy

11318. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-18 03:43:14 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11318

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /The Underestimated Magnetic Loop HF Antenna_V1. 2.pdf
Uploaded by : leigh_turner <invertech@...>
Description : Version 1.2 VK5KLT overview paper The Underestimated Magnetic HF Loop Antenna

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/The%20Underestimated%20Magnetic%20Loop%20HF%20Antenna_V1.%202.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

leigh_turner <invertech@...>

11319. Re: [loopantennas] Military Grade HF Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-18 08:15:17 UTC
From: Jean-L. RAULT
Topic: 11302 Message: 11319

Hi Gian

First of all, I have to find that damned STAREC data book again. It is carefully stored ...somewhere, but where ?

STAREC used many different designs, so the part number would be interesting to know.

Some simple loops use a HV motor driven capacitor, but others are capable of fast frequency changes (some tens of ms for large frequency jumps in ALE mode)

73

Jean-Louis F6AGR

Le 16/03/2016 14:31, i7swx@... [loopantennas] a écrit :
>
>
> Hi Jean-Luis,
>
> it would be interesting to see how the feedpoint was arranged, and the
> measures/size too.
>
> From the picture it looks like the feed point would be double.
>
> Can you please load the technical information on files?
>
> Merci et a bientot
>
> Gian
>
> I7SWX
>
>

11320. Re: [loopantennas] New Member test message

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-18 09:46:56 UTC
From: Maxwell Mclellan
Topic: 11316 Message: 11320

G'day Leigh, Welcome and regards.
Max vk2tti Lake Macquarie NSW.

Sent from my iPad

> On 18 Mar 2016, at 9:52 am, "'Leigh Turner' invertech@frontierisp.net.au [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>
>
> Hi, I have just discovered and accordingly joined this loop antenna group.
>
> I look forward to following the discussions and participation.
>
> Kind regards
> Leigh
> VK5KLT
> Adelaide, Australia
>
>

11321. How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 06:53:10 UTC
From: numeric@...
Topic: 11321 Message: 11321

I do not get it. Is there a difference between a dipole placed in a Faraday shielded room and a shielded loop antenna? A Faraday shielded room will cut emissions by a huge factor, maybe 60 db or more, yet a shielded loop antenna seems to do fine. Either the shielded loop antenna is not really shielded or my concept of shielding is wrong.

Shield is a long and well understood concept that applies to electro-magnetic shielding, not a circuit board designed for Arduino or Raspberry pi boards.
Even the ARRL may be getting badly confused, this month they review a "shield" with receive and transmit capability. "HobbyPCB RS-UV3 Radio Shield". Page 49 April 2016. Must be their notorious April fools joke.

Thanks

11322. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-18 14:21:59 UTC
From: ricksmail@...
Topic: 238 Message: 11322

Always great to see that fine document get out. It was instrumental in convincing me to build a magnetic loop, and I never regretted it.

Thank you Leigh.

Rick KE0NC

11323. Re: How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 07:21:55 UTC
From: gnuarm.2007@...
Topic: 11321 Message: 11323

Yes, there is a difference. A Faraday cage completely shields what is on the inside. A shielded loop antenna does not have a complete shield. In fact, the shield is actually an essential element with current flowing on its surface. There are many references.

Rick

---In loopantennas@yahoogroups.com, <numeric@...> wrote :

I do not get it. Is there a difference between a dipole placed in a Faraday shielded room and a shielded loop antenna? A Faraday shielded room will cut emissions by a huge factor, maybe 60 db or more, yet a shielded loop antenna seems to do fine. Either the shielded loop antenna is not really shielded or my concept of shielding is wrong.

Shield is a long and well understood concept that applies to electro-magnetic shielding, not a circuit board designed for Arduino or Raspberry pi boards.
Even the ARRL may be getting badly confused, this month they review a "shield" with receive and transmit capability. "HobbyPCB RS-UV3 Radio Shield". Page 49 April 2016. Must be their notorious April fools joke.

Thanks

11324. Re: How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 12:17:37 UTC
From: jwin95@...
Topic: 11321 Message: 11324

Nope, Rick, you have a popular misconception of a "Faraday cage" with that description.

NOTE WELL the 'break' in the shield of a "shielded" loop at the top or sometimes the bottom, allowing such loops to be responsive to an incident "H" field but NOT (so much) to the E field.

Consult a good physics or EE textbook to confirm what I am saying.

73, Jim WB5WPA

11325. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 12:56:48 UTC
From: Chris Trask
Topic: 11321 Message: 11325

I added a thorough paper on shielded loops to the group files section a few years ago.

>
>I do not get it. Is there a difference between a dipole placed in a Faraday
>shielded room and a shielded loop antenna? A Faraday shielded room will cut
>emissions by a huge factor, maybe 60 db or more, yet a shielded loop antenna
>seems to do fine. Either the shielded loop antenna is not really shielded or
>my concept of shielding is wrong.
>
>Shield is a long and well understood concept that applies to electro-magnetic
>shielding, not a circuit board designed for Arduino or Raspberry pi boards.
> Even the ARRL may be getting badly confused, this month they review a
>"shield" with receive and transmit capability. "HobbyPCB RS-UV3 Radio Shield".
>Page 49 April 2016. Must be their notorious April fools joke.
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11326. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 09:49:38 UTC
From: H_rax
Topic: 11321 Message: 11326

I'll try to explain, but please excuse my poor English:

An unshielded loop antenna is sensitive both to the magnetic and to the electric component of the hf-field. The electric component produces the so called "antenna effect" which highly is undesirable because it contains most of local electrical disorders. A shielded loop therefore in fact is Faraday-shielded to keep off the electric component, but this Faraday shield must NOT form a closed circle, because this would produce a shortcut for the magnetic component. A nice loop antenna can be made from a coax cable using the inner conductor for the magnetic loop and the outer shield as a Faraday shield grounded on only one side and open on the other side. The loop can be used either as a tuned or as an aperiodic circle. For both modes the loop carefully should be adapted to the input of the rx or the output of the tx.

About April fool jokes: I remember a joke in the ARRL-qst in the early sixties last century: a transmitting tuned loop up on the ridge of the roof. Shortly thereafter various articles had been published discussing the magnetic loop as a transmitting antenna, the "Army-Loop" in Vietnam as an example.

73 de oe4hza, Helmut

Diese E-Mail wurde von Avast Antivirus-Software auf Viren geprüft.
https://www.avast.com/antivirus

11327. RE: [loopantennas] Re: How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 10:19:26 UTC
From: Alan
Topic: 11321 Message: 11327

The shielded loop is in a conductive tube with a small insulated gap. The passing wave induces a current in the wire inside the shield magnetically however the electric field is shorted to the tube and so screens the inner wire. Formally very widely used in direction finders where it is desirable to have the nulls 180 degrees apart where there are a lot of nearby conductors e.g. a ship or plane. The shield is normally Aluminium, it greatly increases the capacitance to ground and so reduces the tuning range if you want to resonate the loop.

If the loop is not screened then the “figure of eight” (a cosine curve for small loops) is degraded if one side of the loop has more capacitance to ground than the other (about the vertical axis

To some degree you can force balance in an unscreened loop by using a coupling transformer which has a grounded centre tap on the loop side, that is a very common approach some active commercial loops take.

Some loops include a resistor to cause the loop to pick up the electric field as well as the magnetic changing the polar diagram into a heart shape, a technique used in the 1930’s.

Regards,
Alan
G8LCO

Sent from Mail for Windows 10

From: gnuarm.2007@... [loopantennas]
Sent: Saturday, March 19, 2016 7:22 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: How does a shielded loop work?

Yes, there is a difference. A Faraday cage completely shields what is on the inside. A shielded loop antenna does not have a complete shield. In fact, the shield is actually an essential element with current flowing on its surface. There are many references.

Rick

---In loopantennas@yahoogroups.com, <numeric@...> wrote :
I do not get it. Is there a difference between a dipole placed in a Faraday shielded room and a shielded loop antenna? A Faraday shielded room will cut emissions by a huge factor, maybe 60 db or more, yet a shielded loop antenna seems to do fine. Either the shielded loop antenna is not really shielded or my concept of shielding is wrong.

Shield is a long and well understood concept that applies to electro-magnetic shielding, not a circuit board designed for Arduino or Raspberry pi boards.
Even the ARRL may be getting badly confused, this month they review a "shield" with receive and transmit capability. "HobbyPCB RS-UV3 Radio Shield". Page 49 April 2016. Must be their notorious April fools joke.

Thanks

11328. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 15:59:48 UTC
From: gnuarm.2007@...
Topic: 11321 Message: 11328

Reading that I found reference to two papers that are not available, [14] and [15]. Do you have these that you could share? I especially would like to read Libby's paper.

[14] Marchand, N., “Complex Transmission Line Network Analysis,” Electrical Communication , Vol. 22, No. 2, 1944, pp. 124-129.

[15] Libby, L.L., “Special Aspects of Balanced Shielded Loops ,” Proceedings of the IRE, Vol.
34, No. 10, October 1946, pp. 641-646.

---In loopantennas@yahoogroups.com, <christrask@...> wrote :

I added a thorough paper on shielded loops to the group files section a few years ago.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/ http://www.home.earthlink.net/~christrask/

11329. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 19:15:42 UTC
From: Chris Trask
Topic: 11321 Message: 11329

I don't seem to have either of those in electronic format. I'll have to find my treeware copies and scan them.

>
>Reading that I found reference to two papers that are not available, [14] and [15]. Do you have these that you could share? I especially would like to read Libby's paper.
>
>[14] Marchand, N., “Complex Transmission Line Network Analysis,” Electrical Communication , Vol. 22, No. 2, 1944, pp. 124-129.
>
>[15] Libby, L.L., “Special Aspects of Balanced Shielded Loops ,” Proceedings of the IRE, Vol.
>34, No. 10, October 1946, pp. 641-646.
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11330. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 19:45:27 UTC
From: Andrew Ikin
Topic: 11321 Message: 11330

Hello Chris,

Libby, L.L., “Special Aspects of Balanced Shielded Loops ,” Proceedings of the IRE, Vol.
>34, No. 10, October 1946, pp. 641-646.

This is available from the IEEE website.

Kind regards

Andrew Ikin

From: mailto:loopantennas@yahoogroups.com
Sent: Saturday, March 19, 2016 7:15 PM
To: loopantennas@yahoogroups.com ; loopantennas@yahoogroups.com
Subject: Re: [loopantennas] How does a shielded loop work?

I don't seem to have either of those in electronic format. I'll have to find my treeware copies and scan them.

>
>Reading that I found reference to two papers that are not available, [14] and [15]. Do you have these that you could share? I especially would like to read Libby's paper.
>
>[14] Marchand, N., “Complex Transmission Line Network Analysis,” Electrical Communication
, Vol. 22, No. 2, 1944, pp. 124-129.
>
>[15] Libby, L.L., “Special Aspects of Balanced Shielded Loops ,” Proceedings of the IRE, Vol.
>34, No. 10, October 1946, pp. 641-646.
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11331. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-20 13:50:44 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11331

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Libby 1946.pdf
Uploaded by : chris3trask <christrask@...>
Description : Special Aspects of Balanced Shielded Loops

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/Libby%201946.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

chris3trask <christrask@...>

11332. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-20 13:55:54 UTC
From: Chris Trask
Topic: 11321 Message: 11332

I just uploaded the Libby paper into the group files section. I cannot yet find my copy of the Marchand paper, so I may have to get another copy the next time I visit the ASU engineering library. I think that "Electrical Communication" was an IRE publication.

>
>Reading that I found reference to two papers that are not available, [14] and [15]. Do you have these that you could share? I especially would like to read Libby's paper.
>
>[14] Marchand, N., “Complex Transmission Line Network Analysis,” Electrical Communication , Vol. 22, No. 2, 1944, pp. 124-129.
>
>[15] Libby, L.L., “Special Aspects of Balanced Shielded Loops ,” Proceedings of the IRE, Vol.
>34, No. 10, October 1946, pp. 641-646.
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11333. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-20 14:34:40 UTC
From: crabtreejr@...
Topic: 11321 Message: 11333

Electrical Communication was an ITT / STC house journal. You can find the issue with Marchand paper at:
http://archivodigital.coit.es/uploads/documentos/ec/1939-1947/vol22-1944-02.pdf

73 John KC0G

-----Original Message-----
From: Chris Trask christrask@... [loopantennas] <loopantennas@yahoogroups.com>
To: loopantennas <loopantennas@yahoogroups.com>; loopantennas <loopantennas@yahoogroups.com>
Sent: Sun, 20 Mar 2016 13:55
Subject: Re: [loopantennas] How does a shielded loop work?

I just uploaded the Libby paper into the group files section. I cannot yet find my copy of the Marchand paper, so I may have to get another copy the next time I visit the ASU engineering library. I think that "Electrical Communication" was an IRE publication.

>
>Reading that I found reference to two papers that are not available, [14] and [15]. Do you have these that you could share? I especially would like to read Libby's paper.
>
>[14] Marchand, N., “Complex Transmission Line Network Analysis,” Electrical Communication , Vol. 22, No. 2, 1944, pp. 124-129.
>
>[15] Libby, L.L., “Special Aspects of Balanced Shielded Loops ,” Proceedings of the IRE, Vol.
>34, No. 10, October 1946, pp. 641-646.
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11334. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-20 15:50:53 UTC
From: Chris Trask
Topic: 11321 Message: 11334

Thank you for that. I can extract the desired pages with Acrobat later.

>
>Electrical Communication was an ITT / STC house journal. You can find the issue with Marchand paper at:
> http://archivodigital.coit.es/uploads/documentos/ec/1939-1947/vol22-1944-02.pdf
>
>
>
> I just uploaded the Libby paper into the group files section. I cannot yet
>find my copy of the Marchand paper, so I may have to get another copy the next
>time I visit the ASU engineering library. I think that "Electrical Communication"
>was an IRE publication.
>
>

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

11335. Re: How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-20 21:06:26 UTC
From: lz1aq@...
Topic: 11321 Message: 11335

From the Sensor & Simulation Notes, EMP-1, Notes 1-574, assembled by Dr. Carl E. Baum.
http://ece-research.unm.edu/summa/notes/SSN/note4.pdf
http://ece-research.unm.edu/summa/notes/SSN/note4.pdf

Chavdar LZ1AQ

11336. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 16:58:12 UTC
From: numeric@...
Topic: 11321 Message: 11336

Thank you Helmut for your reply.

Your comment answers my question. "A shielded loop therefore in fact is Faraday-shielded to keep off the electric component, but this Faraday shield must NOT form a closed circle, because this would produce a shortcut for the magnetic component."

I have never seen a shelled loop antenna up close to see the departure from a closed loop. Now the concept makes sense. It would be very helpful if the loop antenna could be analyzed using NEC2. Its fairly easy to write a function to create a wire grid of any shape; but, will NEC2 or even NEC4 provide reasonable results? More fun with Pascal Object Orented programming (POOP) programming!

Thank you again.

11337. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-19 23:35:04 UTC
From: numeric@...
Topic: 11321 Message: 11337

I found a PDF link at http://thirdworld.nl/special-aspects-of-balanced-shielded-loops
http://thirdworld.nl/order/a620199703ce7bd5fed31863a3933094ba41801dfor
Libby, L.L., “Special Aspects of Balanced Shielded Loops"
It's a free download, you just have to pass a "bot" test.

11338. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 12:11:30 UTC
From: John Seager
Topic: 11321 Message: 11338

(Probably to Chris Trask). Thank you for the 2 fascinating papers from the 1940s and your own.Has there ever been any reasoned suggestion that a shielded loop or a Moebius loop mighthave any advantage at all over a simple small loop for transmitting purposes? John G0UCP

11339. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 13:19:36 UTC
From: Chris Trask
Topic: 11321 Message: 11339

```
>
>(Probably to Chris Trask). Thank you for the 2 fascinating papers from
>the 1940s and your own. Has there ever been any reasoned suggestion that
>a shielded loop or a Moebius loop might have any advantage at all over a
>simple small loop for transmitting purposes?  John  G0UCP
>
```

They might, though I don't know of any examples where they were used for transmitting. A distinct advantage to these two forms of loops is that they act as impedance transformers, making the terminal impedance four of more times higher than that of a non-shielded loop, and when used as an active antenna the higher signal voltage resulting from that transformation helps to diminish the input noise voltage of the amplifier.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11340. RE: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 14:46:58 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11321 Message: 11340
Attachments: 2 described; binary payloads are missing from this source WARC

Chris,

I have read the papers on Moebius Loops by Carl Baum that explain the four fold increase in signal voltage. What happens to the inductive reactance in a Moebius loop? Could we not obtain the same result by using a step up transformer instead?

Also what happens to the inductive reactance of a loop in short circuit mode? My understanding of the inductive reactance in this case is poor to put it mildly. I am trying to learn here.

I have the following simple logic which might be too simplistic to be correct: If we connect a separate inductance to the terminal ends of a loop then the resultant inductive reactance goes down provided the two inductances do not couple. So we can continue to decrease the inductance of the second inductor to a point where the total reactance goes to zero or in other words we have a short.
Does this happen when we use an amplifier with a very low input resistance like the ones you published.
This view might be right or wrong but it was somewhere confirmed when reading about current transformers. One article mentioned specifically that a short in the secondary winding would result in a zero impedance of the primary winding.
If using the loop in short circuit mode reduces or removes the inductive reactance then why is it that the active loops with current amplifiers seem to be less performing at the higher frequencies like the ten meter band or CB band? Is this not the result of the inductive reactance which is not completely suppressed?

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Monday, March 21, 2016 9:20 AM
To: loopantennas@yahoogroups.com; loopantennas@yahoogroups.com
Subject: Re: [loopantennas] How does a shielded loop work?

>
>(Probably to Chris Trask). Thank you for the 2 fascinating papers from
>the 1940s and your own. Has there ever been any reasoned suggestion that
>a shielded loop or a Moebius loop might have any advantage at all over a
>simple small loop for transmitting purposes? John G0UCP
>

They might, though I don't know of any examples where they were used for transmitting. A distinct advantage to these two forms of loops is that they act as impedance transformers, making the terminal impedance four of more times higher than that of a non-shielded loop, and when used as an active antenna the higher signal voltage resulting from that transformation helps to diminish the input noise voltage of the amplifier.

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11341. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 15:03:15 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11341

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /IMAXGRAF.xlsx
Uploaded by : kl7rs <kl7rs@...>
Description : Excel Graph to computer wire antenna and ladder line lengths

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/IMAXGRAF.xlsx

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

kl7rs <kl7rs@...>

11342. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 14:39:42 UTC
From: gmiller27@...
Topic: 11321 Message: 11342

I'm a member of the helically_loaded magloop antenna Yahoo group. Our leader, Rich K8NDS, has what are effectively "Moebius loop" antennas on his QRZ page. If you follow the helical windings on his dual-loop antennas, you will find that the windings make each lobe out-of-phase with the other. (Using the Right-hand rule - with your thumb in the direction of an instantaneous current through the loop structure). Thus, magnetic flux is into one lobe and out of the second. Does this enhance the magnetic field to be a circulating "donut" shape? Or does this have a negative impact on the antenna performance? Empirical evidence seems to indicate that those figure-8 antennas do work, but how efficient are they?

Greg - WB5GM
wb5gm@arrl.net

11343. RE: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 15:43:37 UTC
From: Chris Trask
Topic: 11321 Message: 11343

>
>I have read the papers on Moebius Loops by Carl Baum that explain the
>four fold increase in signal voltage. What happens to the inductive
>reactance in a Moebius loop? Could we not obtain the same result by
>using a step up transformer instead?
>

You can, but the low impedance at the loop terminals makes the design of the stepup transformer quite an ordeal as the induced losses from the transformer core come into play. Take a look at my paper on an alternative design of a transmitting loop:

http://www.home.earthlink.net/~christrask/Paper012.html

>
>Also what happens to the inductive reactance of a loop in short circuit
>mode? My understanding of the inductive reactance in this case is poor
>to put it mildly. I am trying to learn here.
>

It remains intact. That was an issue that I had to come to grips with years ago when designing that wideband loop antenna amplifier.

>
>I have the following simple logic which might be too simplistic to be
>correct: If we connect a separate inductance to the terminal ends of a
>loop then the resultant inductive reactance goes down provided the two
>inductances do not couple. So we can continue to decrease the inductance
>of the second inductor to a point where the total reactance goes to zero
>or in other words we have a short.
>Does this happen when we use an amplifier with a very low input
>resistance like the ones you published.
>

No, it remains as it is an integral part of the loop itself by way of it's self-inductance, though that concept is not entirely accurate unless you apply the transmission line concept taught by Linville.

>
>This view might be right or wrong but it was somewhere confirmed when
>reading about current transformers. One article mentioned specifically
>that a short in the secondary winding would result in a zero impedance
>of the primary winding.
>

It would if not for the leakage inductances and the bulk losses.

>
>If using the loop in short circuit mode reduces or removes the inductive
>reactance then why is it that the active loops with current amplifiers
>seem to be less performing at the higher frequencies like the ten meter
>band or CB band? Is this not the result of the inductive reactance which
>is not completely suppressed?
>

There's much more that comes to play when you operate a loop antenna at higher frequencies, especially when you approach the perceived parallel resonances which are more accurately viewed as a transmission line with a short for a load. See if you can find a copy of my two-part QEX article on active loop antennas where I discuss the transmission line viewpoit, as well as the benefits of using larger diameter conductors to improve the Q.

>Jef
>
>From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
>Sent: Monday, March 21, 2016 9:20 AM
>To: loopantennas@yahoogroups.com; loopantennas@yahoogroups.com
>Subject: Re: [loopantennas] How does a shielded loop work?
>
>
>
>>
>>(Probably to Chris Trask). Thank you for the 2 fascinating papers from
>>the 1940s and your own. Has there ever been any reasoned suggestion that
>>a shielded loop or a Moebius loop might have any advantage at all over a
>>simple small loop for transmitting purposes? John G0UCP
>>
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>They might, though I don't know of any examples where they were used for transmitting. A distinct advantage to these two forms of loops is that they act as impedance transformers, making the terminal impedance four of more times higher than that of a non-shielded loop, and when used as an active antenna the higher signal voltage resulting from that transformation helps to diminish the input noise voltage of the amplifier.
>
>Chris Trask
>N7ZWY / WDX3HLB
>Senior Member IEEE
>http://www.home.earthlink.net/~christrask/
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11344. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 17:13:11 UTC
From: Paul V Birke PEng
Topic: 11321 Message: 11344

really good question!!

On Monday, March 21, 2016 8:14 AM, "John Seager jseager2009@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

(Probably to Chris Trask). Thank you for the 2 fascinating papers from the 1940s and your own.Has there ever been any reasoned suggestion that a shielded loop or a Moebius loop mighthave any advantage at all over a simple small loop for transmitting purposes? John G0UCP

11345. RE: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 17:23:51 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11321 Message: 11345
Attachments: 2 described; binary payloads are missing from this source WARC

Chris,
Thanks for taking the time to reply to my burning questions.
I am familiar with most if not all of your publications and I learned a lot from them.

I do remember that in one of your papers you made a big effort to build a low impedance current transformer using a number of toroids. In the following paper you switched to using a binocular type of output transformer. I tried both approaches and did not find any appreciable difference.

I see some contradiction in your statements below. While the low impedance will clearly be the case at the low frequencies, the opposite would happen at the higher frequencies where the reactance shoots up very rapidly. Does this mean that it would be easier to build a transformer for the higher frequencies where there is a lot of inductive reactance?? When building a transformer should we take into account the inductive reactance at the highest frequency to calculate the number of turns or not??? If the reactance in a closed loop (short circuit) is indeed intact and not suppressed then it would be rather difficult to build a transformer that can cover the full range from say 1.8 Mhz up to 28 Mhz. What is your opinion on covering the full range with one broadband loop antenna and by covering I mean really being able to receive weak amateur stations as well and not broadcast stations. Some even claim that their antennas work up to the FM band and even higher.

All commercial broadband loop manufacturers claim a very large bandwidth from far below 1Mhz up to 30 Mhz and even higher. My findings are that the signal strength goes down substantially at frequencies over 7 Mhz . 14 Mhz is still doable but much at much higher frequencies my little flag antenna wins every time.

In my experiments I make use of three different amplifiers. The first one is a low input common base, the second is a differential amplifier with higher input Z and the third one is a two stage Norton amplifier with 50 ohms input Z. For my frequency range of interest 7 -28 Mhz) I would say that the differential amplifier works best for this range.

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Monday, March 21, 2016 11:44 AM
To: loopantennas@yahoogroups.com; loopantennas@yahoogroups.com
Subject: RE: [loopantennas] How does a shielded loop work?

>
>I have read the papers on Moebius Loops by Carl Baum that explain the
>four fold increase in signal voltage. What happens to the inductive
>reactance in a Moebius loop? Could we not obtain the same result by
>using a step up transformer instead?
>

You can, but the low impedance at the loop terminals makes the design of the stepup transformer quite an ordeal as the induced losses from the transformer core come into play. Take a look at my paper on an alternative design of a transmitting loop:

http://www.home.earthlink.net/~christrask/Paper012.html

>
>Also what happens to the inductive reactance of a loop in short circuit
>mode? My understanding of the inductive reactance in this case is poor
>to put it mildly. I am trying to learn here.
>

It remains intact. That was an issue that I had to come to grips with years ago when designing that wideband loop antenna amplifier.

>
>I have the following simple logic which might be too simplistic to be
>correct: If we connect a separate inductance to the terminal ends of a
>loop then the resultant inductive reactance goes down provided the two
>inductances do not couple. So we can continue to decrease the inductance
>of the second inductor to a point where the total reactance goes to zero
>or in other words we have a short.
>Does this happen when we use an amplifier with a very low input
>resistance like the ones you published.
>

No, it remains as it is an integral part of the loop itself by way of it's self-inductance, though that concept is not entirely accurate unless you apply the transmission line concept taught by Linville.

>
>This view might be right or wrong but it was somewhere confirmed when
>reading about current transformers. One article mentioned specifically
>that a short in the secondary winding would result in a zero impedance
>of the primary winding.
>

It would if not for the leakage inductances and the bulk losses.

>
>If using the loop in short circuit mode reduces or removes the inductive
>reactance then why is it that the active loops with current amplifiers
>seem to be less performing at the higher frequencies like the ten meter
>band or CB band? Is this not the result of the inductive reactance which
>is not completely suppressed?
>

There's much more that comes to play when you operate a loop antenna at higher frequencies, especially when you approach the perceived parallel resonances which are more accurately viewed as a transmission line with a short for a load. See if you can find a copy of my two-part QEX article on active loop antennas where I discuss the transmission line viewpoit, as well as the benefits of using larger diameter conductors to improve the Q.

>Jef
>
>From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
>Sent: Monday, March 21, 2016 9:20 AM
>To: loopantennas@yahoogroups.com; loopantennas@yahoogroups.com
>Subject: Re: [loopantennas] How does a shielded loop work?
>
>
>
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>>(Probably to Chris Trask). Thank you for the 2 fascinating papers from
>>the 1940s and your own. Has there ever been any reasoned suggestion that
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11346. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 17:50:24 UTC
From: gnuarm.2007@...
Topic: 11321 Message: 11346

Transmission and reception place very different requirements on an antenna. The property that affects the transmitting antenna the most is efficiency. That comes down to size. Efficiency is the ratio of the radiation resistance to the sum of the radiation resistance and the loss resistance. The equation for radiation resistance uses the fourth power of the ratio of the antenna diameter to the wavelength. So no matter how much you work to reduce the loss resistance it is very hard to overcome that fourth power of the size.

I would expect a Mobius loop antenna to be very difficult to construct from similar materials to standard loop antennas; 1 to 3 inch copper tubing. I have read where heliax is sometimes used for loops. This might make a reasonable Mobius loop antenna, but I can't see how it would perform significantly better than a standard loop.

Rick

11347. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 19:19:03 UTC
From: Richard (Rick) Karlquist
Topic: 11321 Message: 11347

On 3/21/2016 10:50 AM, gnuarm.2007@... [loopantennas] wrote:
The equation for radiation resistance uses the fourth power
> of the ratio of the antenna diameter to the wavelength. So no matter
> how much you work to reduce the loss resistance it is very hard to
> overcome that fourth power of the size.

More precisely, the radiation resistance is proportional
to the area squared. For transmitting antennas, it is
so critical that the shape of the loop is even a consideration.
The area of a square that will fit inside a circle is 2/pi
times the area of the circle. Thus the radiation resistance
is reduced by a factor of 4/(pi squared) = 0.405. If the
ohmic loss dominates, that's a 4 dB decrease in gain.

Area is also everything when it comes to bandwidth.
If you want to transmit with a loop, make it really big
(in terms of wavelength) and just use wire (or maybe the
outer conductor of RG-6 coax). I realize doing this is
very boring and won't impress anyone with your photos
of 4 inch copper tubing or helical windings. It will
just work on the air.

Rick N6RK

11348. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-21 20:50:23 UTC
From: Andrew Ikin
Topic: 11321 Message: 11348

Jef, wrote on March 21.

All commercial broadband loop manufacturers claim a very large bandwidth from far below 1Mhz up to 30 Mhz and even higher. My findings are that the signal strength goes down substantially at frequencies over 7 Mhz . 14 Mhz is still doable but much at much higher frequencies my little flag antenna wins every time.

Jef, your first sentence is quite correct. See
http://www.wellbrook.uk.com/pdf/ALA1530AntennaFactorChart.pdf

In fact the ALA1530 sensitivity is higher above 14MHz.

With the flag antenna the gain increases by 6dB per octave. This is due to an increase in radiation resistance with frequency compared to the loss with the termination resistance. At low frequencies one has to consider that the termination resistance of the Flag is a 3dB noise source. This is a significant factor when trying to make the antenna small in relation to wavelength.

73

Andrew Ikin

11349. RE: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 13:01:41 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11321 Message: 11349
Attachments: 2 described; binary payloads are missing from this source WARC

Good morning Andrew,

Thanks for your comments. I actually got an ALA 1530 some months ago but have not installed the antenna yet. I am very happy to hear that it’s sensitivity should go up at the higher frequencies.
What it means is that my own home brew loop is still not on par with the big boys but I am learning and I am well aware of some of your work.
Best regards,

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Monday, March 21, 2016 4:50 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] How does a shielded loop work?

Jef, wrote on March 21.

All commercial broadband loop manufacturers claim a very large bandwidth from far below 1Mhz up to 30 Mhz and even higher. My findings are that the signal strength goes down substantially at frequencies over 7 Mhz . 14 Mhz is still doable but much at much higher frequencies my little flag antenna wins every time.

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In fact the ALA1530 sensitivity is higher above 14MHz.

With the flag antenna the gain increases by 6dB per octave. This is due to an increase in radiation resistance with frequency compared to the loss with the termination resistance. At low frequencies one has to consider that the termination resistance of the Flag is a 3dB noise source. This is a significant factor when trying to make the antenna small in relation to wavelength.

73

Andrew Ikin

11350. Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 15:47:53 UTC
From: John Seager
Topic: 11350 Message: 11350

(Note altered thread).Chris kindly responded to the question of whether shielding a small loopmight have any advantages when used for transmission by saying it'might'. That raises a question as to how. The Moebius antenna,effectively a 2 turn loop will increase resistance loss, a notably dumb thingto do in the case of a small loop.A shielded loop might alter the effect of ground proximity and perhaps thatmight be of benefit in some situations. I wonder what the effect of a shield might be on loop resonance?Rick's point that a large wire loop is best of all is certainly true, but the factis that small loops work well and the interest here is just to see if a little morecan be coaxed out of them...73 John G0UCP

11351. Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 16:10:26 UTC
From: gnuarm.2007@...
Topic: 11350 Message: 11351

I think antenna design is often overly simplified. Suggesting that the loss resistance increase of using a two turn loop is a bad thing is not looking at the full picture. If increasing loss resistance were automatically a bad thing, large loops would never be used. Even if you only add a second turn to a loop antenna, the loss resistance doubles, but the radiation resistance quadruples which improves the efficiency. So increasing the loss resistance is not such a dumb thing to do really. The issue is *how* you do it and what you get in return.

Rick (most likely the "other" one)

---In loopantennas@yahoogroups.com, <jseager2009@...> wrote :

(Note altered thread).
Chris kindly responded to the question of whether shielding a small loop might have any advantages when used for transmission by saying it 'might'. That raises a question as to how. The Moebius antenna, effectively a 2 turn loop will increase resistance loss, a notably dumb thing to do in the case of a small loop.
A shielded loop might alter the effect of ground proximity and perhaps that might be of benefit in some situations.
I wonder what the effect of a shield might be on loop resonance?
Rick's point that a large wire loop is best of all is certainly true, but the fact is that small loops work well and the interest here is just to see if a little more can be coaxed out of them...73 John G0UCP

11352. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 15:13:53 UTC
From: Chris Trask
Topic: 11321 Message: 11352

Hmmm... Can't seem to find that group. Do you have a root URL for it?

>
>I'm a member of the helically_loaded magloop antenna Yahoo group.
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11353. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 18:10:54 UTC
From: gnuarm.2007@...
Topic: 11321 Message: 11353

Helically Loaded Fractional Wave Loop Antenna
https://groups.yahoo.com/neo/groups/Helically_Loaded_Mag_Loop/info

https://groups.yahoo.com/neo/groups/Helically_Loaded_Mag_Loop/info

Helically Loaded Fractional Wave Loop Antenna
https://groups.yahoo.com/neo/groups/Helically_Loaded_Mag_Loop/info This group is for builders and users of Helically Loaded Fractional Wave Loop Antennas, as designed by Rich, K8NDS. These small Loop Antennas are a bit dif...

View on groups.yahoo.com
https://groups.yahoo.com/neo/groups/Helically_Loaded_Mag_Loop/info
Preview by Yahoo

11354. Re: How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 18:11:57 UTC
From: gnuarm.2007@...
Topic: 11321 Message: 11354

I got banned from another loop antenna group for posting that same link. lol

11355. Re: [loopantennas] Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 17:26:04 UTC
From: Paul V Birke PEng
Topic: 11350 Message: 11355
Attachments: 1 described; binary payloads are missing from this source WARC

there is also the multiple shielded Moebius loop by Dr. Baum

On Tuesday, March 22, 2016 12:20 PM, "gnuarm.2007@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

I think antenna design is often overly simplified. Suggesting that the loss resistance increase of using a two turn loop is a bad thing is not looking at the full picture. If increasing loss resistance were automatically a bad thing, large loops would never be used. Even if you only add a second turn to a loop antenna, the loss resistance doubles, but the radiation resistance quadruples which improves the efficiency. So increasing the loss resistance is not such a dumb thing to do really. The issue is *how* you do it and what you get in return.

Rick (most likely the "other" one)

---In loopantennas@yahoogroups.com, <jseager2009@...> wrote :

(Note altered thread).Chris kindly responded to the question of whether shielding a small loopmight have any advantages when used for transmission by saying it'might'. That raises a question as to how. The Moebius antenna,effectively a 2 turn loop will increase resistance loss, a notably dumb thingto do in the case of a small loop.A shielded loop might alter the effect of ground proximity and perhaps thatmight be of benefit in some situations. I wonder what the effect of a shield might be on loop resonance?Rick's point that a large wire loop is best of all is certainly true, but the factis that small loops work well and the interest here is just to see if a little morecan be coaxed out of them...73 John G0UCP

11356. RE: [loopantennas] Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 19:51:37 UTC
From: Alan
Topic: 11350 Message: 11356
Attachments: 1 described; binary payloads are missing from this source WARC

What is the point? Very compact transmit loops need as much conductivity as you can get, adding a shield would not help one bit. The efficiency of a TX loop is proportional to the amount of copper in the SINGLE turn, if you increase the surface area or run several parallel tubes then the efficiency improves as you reduce the loss resistance . Shielding the structure would greatly reduce the tuning range by adding distributed capacitance around the loop, then there is the issue of insulating the shield..... does not seem to be sensible.

(note please don’t hang small weights to loops to increase their weight – that is not what was meant!!)

On the other hand if you have the space for a quarter wave around loop I.e. 10 m square sides for 160m you can make an Edgington Loop out of hook up wire. No shield used. If you scale this loop down for 30-10m it becomes very compact and very much cheaper to make than a conventional “”Magnetic”” antenna.

Receive is completely different , you need good balance to minimise noise sensitivity, a shield CAN help but is not essential in most cases.

Alan
G8LCO

Sent from Mail for Windows 10

From: gnuarm.2007@... [loopantennas]
Sent: Tuesday, March 22, 2016 4:20 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: Transmitting with a shielded loop

I think antenna design is often overly simplified. Suggesting that the loss resistance increase of using a two turn loop is a bad thing is not looking at the full picture. If increasing loss resistance were automatically a bad thing, large loops would never be used. Even if you only add a second turn to a loop antenna, the loss resistance doubles, but the radiation resistance quadruples which improves the efficiency. So increasing the loss resistance is not such a dumb thing to do really. The issue is *how* you do it and what you get in return.

Rick (most likely the "other" one)

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A shielded loop might alter the effect of ground proximity and perhaps that might be of benefit in some situations.
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Rick's point that a large wire loop is best of all is certainly true, but the fact is that small loops work well and the interest here is just to see if a little more can be coaxed out of them...73 John G0UCP

11357. RE: [loopantennas] Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 19:56:58 UTC
From: gnuarm.2007@...
Topic: 11350 Message: 11357

That image reminds me of the Mad Poiuyt. See if you can figure out what is enclosed in the shield.

http://www.moillusions.com/wp-content/uploads/2013/04/illusion_fork_3.jpg
http://www.moillusions.com/wp-content/uploads/2013/04/illusion_fork_3.jpg

http://www.moillusions.com/wp-content/uploads/2013/04/illusion_fork_3.jpg

http://www.moillusions.com/wp-content/uploads/2013/04...
http://www.moillusions.com/wp-content/uploads/2013/04/illusion_fork_3.jpg

View on www.moillusions.com
http://www.moillusions.com/wp-content/uploads/2013/04/illusion_fork_3.jpg
Preview by Yahoo

Rick

11358. Re: [loopantennas] Re: Transmitting with a shielded loop [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 20:39:59 UTC
From: Richard (Rick) Karlquist
Topic: 11350 Message: 11358

On 3/22/2016 12:51 PM, Alan g8lco10@... [loopantennas] wrote:
> [Attachment(s) <#TopText> from Alan included below]
>
> What is the point? Very compact transmit loops need as much
> conductivity as you can get, adding a shield would not help one bit. The
> efficiency of a TX loop is proportional to the amount of copper in the
> SINGLE turn, if you increase the surface area or run several parallel
> tubes then the efficiency improves as you reduce the loss resistance .
> Shielding the structure would greatly reduce the tuning range by
> adding distributed capacitance around the loop, then there is the
> issue of insulating the shield..... does not seem to be sensible.

Making a small loop out of a very fat conductor results in an
astronomical Q. Although the theoretical efficiency of the
loop itself might be decent, the high Q will cause the matching
network to be lossy, and you still get low efficiency. If you somehow
overcame this obstacle, the bandwidth would be impractically narrow.

> On the other hand if you have the space for a quarter wave around loop
> I.e. 10 m square sides for 160m you can make an Edgington Loop out of
> hook up wire. No shield used. If you scale this loop down for 30-10m it
> becomes very compact and very much cheaper to make than a conventional
> “”Magnetic”” antenna.
>
> Receive is completely different , you need good balance to minimise
> noise sensitivity, a shield CAN help but is not essential in most cases.

Yes, if you make the loop circumference 1/4 wavelength, it actually
starts to work as a transmit antenna, although the bandwidth will
still be narrow if it's efficient. Loops this large are not
"magnetic" loops in the sense of emanating pure magnetic fields.
Rather, they are more like short bent dipoles. They have a very
shallow null broadside, which is probably good if you are transmitting.
The current around the loop is not uniform.

Edginton (there is no "g" in his name) mentions that his 1/4 wave
160 meter loop is 1/2 wave on 80 meters, and thus hard to drive
because the impedance is very high; IE it is parallel resonant.
He neglects to mention that there is a very simple fix for this.
Just open the loop at the midpoint away from the feedpoint.
Now it is basically a bent 1/2 wave dipole. No
problem at all. Of course this dipole will work better if you
don't bend the ends so much that they almost touch.
>
> Alan
>

> G8LCO
>

Rick N6RK

11359. Re: [loopantennas] Re: How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-22 22:15:23 UTC
From: Chris Trask
Topic: 11321 Message: 11359

The frail egos of some of these narcissistic idiots defy comprehension. I retired almost 14 years ago so that I didn't have to endure them further. Now I just use the spam filter.

>
>I got banned from another loop antenna group for posting that same link. lol
>

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

11360. RE: [loopantennas] Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-24 18:17:25 UTC
From: Alan
Topic: 11350 Message: 11360
Attachments: 1 described; binary payloads are missing from this source WARC

Sorry for the typo in Ben Edginton’s name. If you would like to see the Edginton Loop have a look at : g0cwt.co.uk/magloops. The loop is a quarterwave of thin wire with a series tuning capacitor and a ferrite transformer next to the tuning capacitor. I had read about it in Radcom one month then forgotten all about it. One night I received a very good 160m WSPR signal from Texas in the UK, an email then said it was an Edginton Loop 40’ wide.

Good luck and goodbye.

Alan
G8LCO

Sent from Mail for Windows 10

From: 'Richard (Rick) Karlquist' richard@... [loopantennas]
Sent: Tuesday, March 22, 2016 8:40 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Transmitting with a shielded loop

On 3/22/2016 12:51 PM, Alan g8lco10@... [loopantennas] wrote:
> [Attachment(s) <#TopText> from Alan included below]
>
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> conductivity as you can get, adding a shield would not help one bit. The
> efficiency of a TX loop is proportional to the amount of copper in the
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Edginton (there is no "g" in his name) mentions that his 1/4 wave 160 meter loop is 1/2 wave on 80 meters, and thus hard to drive because the impedance is very high; IE it is parallel resonant. He neglects to mention that there is a very simple fix for this. Just open the loop at the midpoint away from the feedpoint. Now it is basically a bent 1/2 wave dipole. No problem at all. Of course this dipole will work better if you don't bend the ends so much that they almost touch.
>
> Alan
>
> G8LCO
>

Rick N6RK

11361. RE: [loopantennas] Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-24 18:57:09 UTC
From: gnuarm.2007@...
Topic: 11350 Message: 11361

I see Edginton has a patent on his loop. Reading the patent I can't see what aspects are particularly patentable. He seems to list the fact that it is portable as well as using "multi core" wire. Was any of that new in 1995? I've seen photos of loop antennas from the early part of the 20th century.

One thing I have learned about loop antennas more recently that the huge emphasis on low loss construction methods is not at all important if the size of the loop is increased adequately. In other words, if you can use a large loop in relation to the wavelength, it can be wire rather than copper tubing. That seems to be what his antenna is about, but that surely wasn't remotely new in 1995.

Rick C

11362. Safe Ladder Line

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-24 20:26:25 UTC
From: fsurovec@...
Topic: 11362 Message: 11362

I am about to complete construction of a 80 meter sky wire fed with ladder line. Talking to the local hams around here about antenna safety it seems like almost all the guys around here using ladder line have the line sitting just outside the shack on a string.... when it is time to transmit they open the window, connect the line and go for it. I would like something different.

I know I have read (probably awhile ago on this group) using knife switches to ground when the antenna was not in use..... I have even read of using a spark plug to dissipate static charge, etc. What is the going trend these days?

Thanks!

Francis
WA3GGV

11363. Re: [loopantennas] Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-24 23:15:21 UTC
From: John Seager
Topic: 11350 Message: 11363

'...Reading the patent I can't see what aspects are particularly patentable. He seems to list the fact that it is portable as well as using "multi core" wire. Was any of that new in 1995?'

I think it was the transformer coupling, though the late C.F. Rockey, W9SCH had described something remarkably similar in 1989 (Sprat No. 60). Patents are curious things. John
 G0UCP

| Reply via web post | • | Reply to sender | • | Reply to group | • | Start a New Topic | • | Messages in this topic (8) |

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Save time and get your email on the go with the Yahoo Mail App Get the beautifully designed, lighting fast, and easy-to-use, Yahoo Mail app today. Now you can access all your inboxes (Gmail, Outlook, AOL and more) in one place. Never delete an email again with 1000GB of free cloud storage. If you've got links, post them in the Links section!
http://groups.yahoo.com/group/loopantennas/links

Post files here. If the file comes from a website, please put it in the Links rather than uploading the file.
http://groups.yahoo.com/group/loopantennas/files

You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
http://ph.groups.yahoo.com/group/loopantennas/photos

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.

11364. Re: Transmitting with a shielded loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-25 00:07:51 UTC
From: gnuarm.2007@...
Topic: 11350 Message: 11364

Regardless, the patent expired last year, so it's no longer patented....

Rick C

'...Reading the patent I can't see what aspects are particularly patentable. He seems to list the fact that it is portable as well as using "multi core" wire. Was any of that new in 1995?'

I think it was the transformer coupling, though the late C.F. Rockey, W9SCH had described something remarkably similar in 1989 (Sprat No. 60). Patents are curious things. John G0UCP

11365. RE: [loopantennas] Re: Patent No GB 2285712

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-25 01:00:54 UTC
From: Leigh Turner
Topic: 11350 Message: 11365

I think the patent was a pretty inconsequential lightweight one anyway. The main novelty was encapsulated in principal Claim 1 pertaining to the xfmr feed and matching arrangement, the remainder dependent claims are quite trivial. But even the transformer feed method has copious prior art.

As Rick N6RK said in an earlier post the large quarter-wave loop circumference deviates substantially from magnetic loop mode; being instead a bent folded-up short dipole with added lumped capacitance to achieve resonance. The thin conductor wire structures are not classical small magnetic loop radiators exhibiting substantially uniform current, but nevertheless radiate well, have usefully wide VSWR bandwidth, and give good accounts of themselves for DX if orientated in the direction of their principal pattern lobe.

Leigh

VK5KLT

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Friday, 25 March 2016 10:38 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Re: Transmitting with a shielded loop

Regardless, the patent expired last year, so it's no longer patented....

Rick C

'...Reading the patent I can't see what aspects are particularly patentable. He seems to list the fact that it is portable as well as using "multi core" wire. Was any of that new in 1995?'

I think it was the transformer coupling, though the late C.F. Rockey, W9SCH had described something remarkably similar in 1989 (Sprat No. 60). Patents are curious things. John G0UCP

11366. Re: [loopantennas] Safe Ladder Line

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-25 07:49:38 UTC
From: Brian
Topic: 11362 Message: 11366

Francis,
For many years I ran with a diamond shaped horizontal full wave loop on 40m SSB at 20ft above the back lawn using 5 watts from a very old Trio TS-130V and had great fun working the world.

I tried numerous feedlines from 1/4 wave 75 ohm co-ax, 120 ohm twin line, simple loudspeaker cable, 300 ohm ribbon line and homebrew 600 ohm but finally settled on no feedline just running the ends of the loop to the rear of a SO-239 socket on a wall panel and a 3ft 75 ohm co-ax patch lead to the rig.

Over the years I had numerous ‘ static clouts ‘ whilst unplugging the lead in stormy wx so got into the habit of letting go the mast halyard and letting the antenna lie on the grass.
Under such conditions I have seen static sparking between the centre and body of the SO-239 socket so beware.

Good luck with the trials.
Regards,
72, Brian, GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Thursday, March 24, 2016 8:26 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Safe Ladder Line

I am about to complete construction of a 80 meter sky wire fed with ladder line. Talking to the local hams around here about antenna safety it seems like almost all the guys around here using ladder line have the line sitting just outside the shack on a string.... when it is time to transmit they open the window, connect the line and go for it. I would like something different.

I know I have read (probably awhile ago on this group) using knife switches to ground when the antenna was not in use..... I have even read of using a spark plug to dissipate static charge, etc. What is the going trend these days?

Thanks!

Francis
WA3GGV

11367. Re: [loopantennas] Safe Ladder Line

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-25 09:57:48 UTC
From: Everett Sharp
Topic: 11362 Message: 11367

Hi Francis,

If you will look in the file section on this group you will find a article that
I posted "Loop Balun Experiment". In the article I looked at different baluns
on my 275' Horizontal loop. Using a 4:1 current balun I have band coverage
on all bands from 80 through 6 meters, including the WARC bands, with the exception of 60
meters.

I am using about 100' of RG-8X coax from the antenna to my shack
and have the coax shield grounded just before it enters the house. This
eliminates any static build up on the antenna. I do use my K3S antenna
tuner if I want to operate on 75 meters.

Everett N4CY

Sent from my iPad

> On Mar 25, 2016, at 2:49 AM, 'Brian' brian.nsl@... [loopantennas]
<loopantennas@yahoogroups.com> wrote:
>
> Francis,
> For many years I ran with a diamond shaped horizontal full wave loop on 40m
> SSB at 20ft above the back lawn using 5 watts from a very old Trio TS-130V
> and had great fun working the world.
>
> I tried numerous feedlines from 1/4 wave 75 ohm co-ax, 120 ohm twin line,
> simple loudspeaker cable, 300 ohm ribbon line and homebrew 600 ohm
> but finally settled on no feedline just running the ends of the loop to
> the rear of a SO-239 socket on a wall panel and a 3ft 75 ohm co-ax patch lead to
> the rig.
>
> Over the years I had numerous ‘ static clouts ‘ whilst unplugging the lead in stormy wx
> so got into the habit of letting go the mast halyard and letting the antenna lie on the
grass.
> Under such conditions I have seen static sparking between the centre and body of the
> SO-239 socket so beware.
>
> Good luck with the trials.
> Regards,
> 72, Brian, GØNSL.
>
> From: mailto:loopantennas@yahoogroups.com
> Sent: Thursday, March 24, 2016 8:26 PM
> To: loopantennas@yahoogroups.com
> Subject: [loopantennas] Safe Ladder Line
>

>
> I am about to complete construction of a 80 meter sky wire fed with ladder line. Talking to the local hams around here about antenna safety it seems like almost all the guys around here using ladder line have the line sitting just outside the shack on a string.... when it is time to transmit they open the window, connect the line and go for it. I would like something different.
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> I know I have read (probably awhile ago on this group) using knife switches to ground when the antenna was not in use..... I have even read of using a spark plug to dissipate static charge, etc. What is the going trend these days?
>
> Thanks!
>
> Francis
> WA3GGV
>
>
>

11368. Re: [loopantennas] Safe Ladder Line

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-26 14:24:53 UTC
From: jwin95@...
Topic: 11362 Message: 11368

"a 4:1 current balun"

Refresh my memory - is this a ferrite-loaded TLT (transmission line transformer) or a flux-coupled transformer, or something else?

I can never get these new terms straight ,,,

de Jim WB5WPA

11369. Re: [loopantennas] Safe Ladder Line

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-26 16:03:08 UTC
From: Richard (Rick) Karlquist
Topic: 11362 Message: 11369

If you really want this to work, it should be
done in two stages. A 1:1 current balun
using a ferrite-loaded transmission line.
(Preferably a large ferrite toroid with multiple
turns of coax, rather than the markedly
inferior string of beads around the coax).
The 4:1 impedance transformation should be
done separately, preferably with a Ruthroff
type (not a Guanella) transmission line
transformer using 100 ohm transmission
line for the windings. Series
peaking capacitors can be added to extend
the low frequency range and parallel peaking
capacitors can be added to extend the
high frequency range.

Rick N6RK

On 3/26/2016 7:24 AM, jwin95@... [loopantennas] wrote:
>
>
> "a 4:1 current balun"
>
> Refresh my memory - is this a ferrite-loaded TLT (transmission line
> transformer) or a flux-coupled transformer, or something else?
>
> I can never get these new terms straight ,,,
>
> de Jim WB5WPA
>
>

11370. Re: [loopantennas] Safe Ladder Line

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-26 16:57:35 UTC
From: Everett Sharp
Topic: 11362 Message: 11370

Common Mode Currents do not seam to be a problem with a horizontal loop. I have no RFI issues, however, I do use a 4:1 home brew current balun using dual cores with 10 bifilar turns on each.

Everett N4CY

Sent from my iPad

> On Mar 26, 2016, at 11:03 AM, 'Richard (Rick) Karlquist' richard@karlquist.com [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> If you really want this to work, it should be
> done in two stages. A 1:1 current balun
> using a ferrite-loaded transmission line.
> (Preferably a large ferrite toroid with multiple
> turns of coax, rather than the markedly
> inferior string of beads around the coax).
> The 4:1 impedance transformation should be
> done separately, preferably with a Ruthroff
> type (not a Guanella) transmission line
> transformer using 100 ohm transmission
> line for the windings. Series
> peaking capacitors can be added to extend
> the low frequency range and parallel peaking
> capacitors can be added to extend the
> high frequency range.
>
> Rick N6RK
>
> On 3/26/2016 7:24 AM, jwin95@yahoo.com [loopantennas] wrote:
> >
> >
> > "a 4:1 current balun"
> >
> > Refresh my memory - is this a ferrite-loaded TLT (transmission line
> > transformer) or a flux-coupled transformer, or something else?
> >
> > I can never get these new terms straight ,,,
> >
> > de Jim WB5WPA
> >
> >
>

11371. Re: [loopantennas] How does a shielded loop work?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-03-30 14:17:20 UTC
From: christrask@...
Topic: 11321 Message: 11371

Thank you for posting this. I couldn't get around to downloading it until his morning. Now I don't have to look for the treeware copy that I misplaced.

11372. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-01 13:08:19 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11372

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11373. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-01 13:08:20 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11373

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11374. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-03 10:41:27 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11374

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /F8DQL/balun.jpg
Uploaded by : f8dql <f8dql@...>
Description : Varactor-Tuned Loop transformer

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/balun.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

f8dql <f8dql@...>

11375. N7ZWY's Varactor-Tuned Loop transformer question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-03 10:46:32 UTC
From: f8dql@...
Topic: 11375 Message: 11375

Hello,
I am decided to build the loop described by Chris N7ZWY, but I am unsure about the transformer.
Would you please tell me which winding is the good one?
73

https://xa.yimg.com/df/loopantennas/balun.jpg?token=2DlPy2QNfeRNEP6UOzQs-zHnxMbUJjdiLm_GIjuZRULoPGGqdUF4w2Q-L58zWYgnIcO56XAFmTylxlySh0wvOSEK1GIKmEhfU0tPBrI3&type=download https://xa.yimg.com/df/loopantennas/balun.jpg?token=2DlPy2QNfeRNEP6UOzQs-zHnxMbUJjdiLm_GIjuZRULoPGGqdUF4w2Q-L58zWYgnIcO56XAFmTylxlySh0wvOSEK1GIKmEhfU0tPBrI3&type=download

https://xa.yimg.com/df/loopantennas/balun.jpg?token=2DlPy2QNfeRNEP6UOzQs-zHnxMbUJjdiLm_GIjuZRULoPGGqdUF4w2Q-L58zWYgnIcO56XAFmTylxlySh0wvOSEK1GIKmEhfU0tPBrI3&type=download

https://xa.yimg.com/df/loopantennas/balun.jpg?token=2DlP... https://xa.yimg.com/df/loopantennas/balun.jpg?token=2DlPy2QNfeRNEP6UOzQs-zHnxMbUJjdiLm_GIjuZRULoPGGqdUF4w2Q-L58zWYgnIcO56XAFmTylxlySh0wvOSEK1GIKmEhfU0tPBrI3&type=download

View on xa.yimg.com https://xa.yimg.com/df/loopantennas/balun.jpg?token=2DlPy2QNfeRNEP6UOzQs-zHnxMbUJjdiLm_GIjuZRULoPGGqdUF4w2Q-L58zWYgnIcO56XAFmTylxlySh0wvOSEK1GIKmEhfU0tPBrI3&type=download
Preview by Yahoo

11376. Re: N7ZWY's Varactor-Tuned Loop transformer question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-03 13:53:38 UTC
From: f8dql@...
Topic: 11375 Message: 11376

Sorry, the link is broken. Here is the good one:
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/balun.jpg
https://groups.yahoo.com/neo/groups/loopantennas/files/F8DQL/balun.jpg

11377. Ferrite Sleeve Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-09 03:27:07 UTC
From: hmholden69@...
Topic: 11377 Message: 11377

I am a MW Dxer and have been reading about a relatively new type of loop called a Ferrite Sleeve Loop. It seems to be several ferrite rods or bars mounted around a central round form and then overwound with litz wire to form a coil that is connected to a variable capacitor to get resonance. The thing kind of looks like a gatlin gun. Most of these I have read about are usually just inductively coupled to a loopstick in a radio and seem to give performance equal to or better than a 4 foot box loop but in a more compact package. I am interested in building one of these but want to feed directly to a communications receiver that has no internal loop stick. Has anyone had any experience in doing this? I'm thinking you would have to wind a one or two turn coupling link next to the main coil.

11378. Re: [loopantennas] Ferrite Sleeve Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-09 08:11:00 UTC
From: Brian
Topic: 11377 Message: 11378

Hi,
Whilst not giving you ‘ chapter & verse’ on the subject
put ‘ Ferrite sleeve loop antennas ‘ in Google, then when the hits appear click on
‘ images ‘ at the top, the many pictures will give you ideas and if you want to know more
click on the adjacent photo website.

I find this method gives a good overall coverage whatever the subject.

Regards,
72, Brian, GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Saturday, April 09, 2016 4:27 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Ferrite Sleeve Loop

11379. Re: Ferrite Sleeve Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-09 08:29:23 UTC
From: nick.nickrumple@...
Topic: 11377 Message: 11379

I think maybe if you place a 1:1 or 4:1 balun transformer between the loop and receiver, the secondary coil of the balun (the coil connected to the receiver), should take the place of the missing internal loopstick.

Nick Rumple
Kannapolis, North Carolina

11380. Re: [loopantennas] Ferrite Sleeve Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-09 09:56:36 UTC
From: Everett Sharp
Topic: 11377 Message: 11380

You can couple up to a FSL, using a 1 turn coil. The coil is connected to a matching transformer, which is made using a ferrite binocular core BN73-202, with with 2 turns wound on the 50 ohm side and 16 turns on the coupling loop side.

This works well without killing the Q of the tank circuit. This same matching transformer also works very well with air coil tuned loops.

Everett N4CY

Sent from my iPad

> On Apr 8, 2016, at 10:27 PM, hmholden69@... [loopantennas]
<loopantennas@yahoogroups.com> wrote:
>
> I am a MW Dxer and have been reading about a relatively new type of loop called a Ferrite Sleeve Loop. It seems to be several ferrite rods or bars mounted around a central round form and then overwound with litz wire to form a coil that is connected to a variable capacitor to get resonance. The thing kind of looks like a gatlin gun. Most of these I have read about are usually just inductively coupled to a loopstick in a radio and seem to give performance equal to or better than a 4 foot box loop but in a more compact package. I am interested in building one of these but want to feed directly to a communications receiver that has no internal loop stick. Has anyone had any experience in doing this? I'm thinking you would have to wind a one or two turn coupling link next to the main coil.
>
>
>
>

11381. Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-21 18:39:45 UTC
From: ferrox4@...
Topic: 11381 Message: 11381

I was wondering if anyone could share a generic loop antenna amplifier schematic. I would like to try my hand at building one if possible. Something similiar to lets say the wellbrook ala-100 or such. Does anything exist like this?? I recently built an e field probe mini whip antenna and I like it very much. I just can't get enough wire in the air for a good passive antenna due to not enough real estate.
Thank you, John in fla

Sent from my iPhone

11382. Re: [loopantennas] Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-21 21:14:15 UTC
From: Brian
Topic: 11381 Message: 11382

John,
I use this version by a UK amateur.

Loop Antenna. - QSL.net
www.qsl.net/m0ayf/active-loop-receiving-antenna.html Broad Bandwidth Loop Antenna. ... A Wide Bandwidth Active Loop Receiving Antenna. With acknowledgements to the original design by .... 73,s. Des (M0AYF)
☐Circuit details and ... - ☐Loop amplifier schematic. - ☐The loop amplifiers "power ...

Worth a read and any queries Des is a friendly guy.

72, Brian, GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Thursday, April 21, 2016 7:39 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Schematic for loop amplifier

11383. Re: [loopantennas] Ferrite Sleeve Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-21 22:44:39 UTC
From: hmholden69@...
Topic: 11377 Message: 11383

Thanks for the info on the coupling transformer. I have ordered some of those binocular cores and will have a go at winding it. I want to try on a 3 foot box loop that has a one turn coupling loop. I will use the 8:1 winding ratio you suggested and attach that to the one turn coupling link. If I remember correctly the square root of the transformer winding ratio gives the impedance ratio.

11384. Re: [loopantennas] Ferrite Sleeve Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-21 22:50:53 UTC
From: Everett Sharp
Topic: 11377 Message: 11384

The impedance ratio is 3200:1

Everett N4CY

Sent from my iPad

> On Apr 21, 2016, at 5:44 PM, hmholden69@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Thanks for the info on the coupling transformer. I have ordered some of those binocular cores and will have a go at winding it. I want to try on a 3 foot box loop that has a one turn coupling loop. I will use the 8:1 winding ratio you suggested and attach that to the one turn coupling link. If I remember correctly the square root of the transformer winding ratio gives the impedance ratio.
>
>

11385. Re: [loopantennas] Ferrite Sleeve Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-21 23:05:14 UTC
From: Everett Sharp
Topic: 11377 Message: 11385

Correction, that should be 3200:50 ohms.

Everett N4CY

Sent from my iPad

> On Apr 21, 2016, at 5:44 PM, hmholden69@... [loopantennas]
<loopantennas@yahoogroups.com> wrote:
>
> Thanks for the info on the coupling transformer. I have ordered some of those binocular cores and will have a go at winding it. I want to try on a 3 foot box loop that has a one turn coupling loop. I will use the 8:1 winding ratio you suggested and attach that to the one turn coupling link. If I remember correctly the square root of the transformer winding ratio gives the impedance ratio.
>
>

11386. Re: [loopantennas] Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-22 13:38:26 UTC
From: Chris Trask
Topic: 11381 Message: 11386

I posted such an amplifier in the files section almost six years ago:

WidebandLoopAntennaAmplifierRevA.pdf

It's a bit ambitious, but has performance at least equal to that of the Wellbrook.

>
>I was wondering if anyone could share a generic loop antenna amplifier schematic. I would like to try my hand at building one if possible. Something similiar to lets say the wellbrook ala-100 or such. Does anything exist like this?? I recently built an e field probe mini whip antenna and I like it very much. I just can't get enough wire in the air for a good passive antenna due to not enough real estate.
>Thank you, John in fla
>
>Sent from my iPhone

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

11387. Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-26 20:59:39 UTC
From: lz1aq@...
Topic: 11381 Message: 11387

Wideband Active Small Magnetic Loop Antenna

http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm

73 Chavdar LZ1AQ

11388. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-26 23:12:39 UTC
From: Richard (Rick) Karlquist
Topic: 11381 Message: 11388

On 4/26/2016 1:59 PM, lz1aq@... [loopantennas] wrote:
>
> Wideband Active Small Magnetic Loop Antenna
>
> http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
>
> 73 Chavdar LZ1AQ
>

The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?

Rick N6RK

11389. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-26 23:52:28 UTC
From: Chris Trask
Topic: 11381 Message: 11389

Back when I first looked into wideband active loops, I learned by way of EZNEC that the radiation pattern deteriorated quickly as the terminal impedance was increased. It made sense when considering that the loop antenna is a current source, not a voltage source. This made the design of the amplifier very simple as no matching network was needed, just a low input impedance amplifier.

>
>>
>> Wideband Active Small Magnetic Loop Antenna
>>
>> http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
>>
>> 73 Chavdar LZ1AQ
>>
>
>The cited article states:
>
>"This amplifier must be with very low input impedance."
>
>Why does the input impedance need to be very low?
>
>Rick N6RK
>

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

11390. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 00:43:06 UTC
From: ferrox4@...
Topic: 11381 Message: 11390

Since the input impedance is very low, Wouldn't that suggest that only strong signals would get amplified and that the antenna wouldn't be sensitive enough to be driven
Properly with weak signals? Or does only pertain to voltage type Amplifiers? Thanks John

Sent from my iPhone

> On Apr 26, 2016, at 7:52 PM, "Chris Trask christrask@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Back when I first looked into wideband active loops, I learned by way of EZNEC that the radiation pattern deteriorated quickly as the terminal impedance was increased. It made sense when considering that the loop antenna is a current source, not a voltage source. This made the design of the amplifier very simple as no matching network was needed, just a low input impedance amplifier.
>
> >
> >>
> >> Wideband Active Small Magnetic Loop Antenna
> >>
> >> http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
> >>
> >> 73 Chavdar LZ1AQ
> >>
> >
> >The cited article states:
> >
> >"This amplifier must be with very low input impedance."
> >
> >Why does the input impedance need to be very low?
> >
> >Rick N6RK
> >
>
> Chris
>
> When the going gets weird, the weird turn pro
> - Hunter S. Thompson
>

11391. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 09:50:59 UTC
From: Andrew Ikin
Topic: 11381 Message: 11391

Rick wrote on April 27.

snip<The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?>

Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier. However, the loss due to loop/amp. miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp. will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.

73

Andrew Ikin

11392. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 13:00:09 UTC
From: gnuarm.2007@...
Topic: 11381 Message: 11392

This may be a bit confusing, so I'll try to remember to sign my posts as Rick C.

Antenna Factor with a fixed impedance receiver input of 50 ohms is defined as AF = 9.73 / (Lambda * G) where G is the antenna gain.

This formula accounts for the impedance mismatch between the antenna and receiver. So the AF still varies with frequency. Using a receiver with even lower input impedance than 50 ohms only changes the constant from 9.73 to another, higher value. Antenna Gain is a function of the radiation pattern and not related to the radiation resistance. As long as the antenna size is small compared to lambda the gain will not vary much.

By definition the antenna factor always changes with frequency.

Rick C.

---In loopantennas@yahoogroups.com, <andrew.ikin@...> wrote :

Rick wrote on April 27.

snip<The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?>

Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier. However, the loss due to loop/amp. miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp. will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.

73

Andrew Ikin

11393. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 13:45:56 UTC
From: ferrox4@...
Topic: 11381 Message: 11393

I have a hard time grasping the theory of impedance. Here's a question I have for the group or anyone who wishes to answer it. Why in a crystal radio set is it better to have high impedance headphones vs. low impedance headphones to hear the signal. Wouldn't the low impedance headphones allow for the tiny signal to pass easier, where as the high impedance would block the signal? I know it's a stupid question, but I wish someone could explain impedance in layman's terms.

Sent from my iPhone

> On Apr 27, 2016, at 5:50 AM, "Andrew Ikin andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>
> Rick wrote on April 27.
>
>
> snip<The cited article states:
>
> "This amplifier must be with very low input impedance."
>
> Why does the input impedance need to be very low?>
>
> Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier. However, the loss due to loop/amp. miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp. will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.
>
> 73
>
> Andrew Ikin
>
>
>

11394. RE: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 12:31:54 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11381 Message: 11394
Attachments: 3 described; binary payloads are missing from this source WARC

Good morning Andrew, Chavdar,

I fully understand the theory and logic of using a low Z and more so when you are talking about the lower frequencies. The various low Z amplifiers that I built all give very, very strong signals at the lower frequencies up to and including the 7 Mhz band. However at 14 Mhz the signal strength tends to go down and at 21 and 28 Mhz there is a very serious reduction in signal strength. Yes I can copy stations and the big guns in the CB band at 27.025 Mhz from California are loud (S 9) in Florida and so are the various AM broadcast stations. Lower power amateurs in the higher bands are however disappointing and are much easier to receive with a flag antenna that I have in the attic.
The only logic I see here is that the impedance goes up much faster than the increase in radiation resistance. Chris Trask in his papers shows a graph of the impedance increase which shows a very steep increase around 14 Mhz which seems to confirm my own findings. I think that it is very unlikely that you get a constant antenna factor up to 30Mhz with a low Z amplifier. Whether this is due to various resonances I do not know.
To receive amateur stations in the 14Mhz up to 28Mhz bands I get much better results by using a differential amplifier with a much higher Z and by using a 4:1 input balun in order to reduce the impedance at the loop ends. Using an MFJ antenna analyzer I do get values of some 200 -350 ohms impedance at the loop ends over the frequency range from 14-28Mhz.
BTW I am using a 90cm diameter low impedance loop (alu strip of 1 inch). The inductance of the loop measured with an LC meter gave me a value of 1.7 microhenry.
Anyway I am having fun with these loops,

Jef

From: loopantennas@yahoogroups.com<mailto:loopantennas@yahoogroups.com>
[mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, April 27, 2016 5:51 AM
To: loopantennas@yahoogroups.com<mailto:loopantennas@yahoogroups.com>
Subject: Re: [loopantennas] Re: Schematic for loop amplifier

Rick wrote on April 27.

snip<The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?>

Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier. However, the loss due to loop/amp. miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp. will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.

73

Andrew Ikin

11395. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 14:23:35 UTC
From: gnuarm.2007@...
Topic: 11381 Message: 11395

In the case of the headphones you are trying to maximize the power into the headphones. In this case "high" is relative and 600 ohms would be considered "high" impedance. Using a lower impedance would mostly drag down the voltage on the output resulting in less power being transferred to the headphones.

It is easy to show you get the maximum power transferred into a load if you use a load that matches the impedance of the source. The issue is not current or voltage, but the product of the two. Too high an impedance and the current drops too much, too low an impedance and the voltage drops too much.

Rick C.

---In loopantennas@yahoogroups.com, <ferrox4@...> wrote :

I have a hard time grasping the theory of impedance. Here's a question I have for the group or anyone who wishes to answer it. Why in a crystal radio set is it better to have high impedance headphones vs. low impedance headphones to hear the signal. Wouldn't the low impedance headphones allow for the tiny signal to pass easier, where as the high impedance would block the signal? I know it's a stupid question, but I wish someone could explain impedance in layman's terms.

Sent from my iPhone

On Apr 27, 2016, at 5:50 AM, "Andrew Ikin andrew.ikin@... mailto:andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com mailto:loopantennas@yahoogroups.com> wrote:

Rick wrote on April 27.

snip<The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?>

Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier. However, the loss due to loop/amp. miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp. will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.

73

Andrew Ikin

11396. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 18:26:22 UTC
From: ferrox4@...
Topic: 11381 Message: 11396

Thanks for the explanation, that helped a lot. With a dc source and resistance it's very straight forward. Throw in an ac signal, inductance, capacitance and all
The combinations on top of resistance and all of a sudden it's not so straight forward.

Sent from my iPhone

> On Apr 27, 2016, at 10:23 AM, "gnuarm.2007@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> In the case of the headphones you are trying to maximize the power into the headphones. In this case "high" is relative and 600 ohms would be considered "high" impedance. Using a lower impedance would mostly drag down the voltage on the output resulting in less power being transferred to the headphones.
>
> It is easy to show you get the maximum power transferred into a load if you use a load that matches the impedance of the source. The issue is not current or voltage, but the product of the two. Too high an impedance and the current drops too much, too low an impedance and the voltage drops too much.
>
> Rick C.
>
>
>
> ---In loopantennas@yahoogroups.com, <ferrox4@...> wrote :
>
> I have a hard time grasping the theory of impedance. Here's a question I have for the group or anyone who wishes to answer it. Why in a crystal radio set is it better to have high impedance headphones vs. low impedance headphones to hear the signal. Wouldn't the low impedance headphones allow for the tiny signal to pass easier, where as the high impedance would block the signal? I know it's a stupid question, but I wish someone could explain impedance in layman's terms.
>
> Sent from my iPhone
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>> On Apr 27, 2016, at 5:50 AM, "Andrew Ikin andrew.ikin@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
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>>
>> 73
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>> Andrew Ikin
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>

11397. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 18:36:04 UTC
From: Andrew Ikin
Topic: 11381 Message: 11397

Dear Rick C,

My post was in reply to Richard Karlquist.

You say that “Antenna Gain is a function of the radiation pattern and not related to the radiation resistance”. I don’t agree with this statement; because the gain seen in the radiation pattern is due to the antennas radiation resistance.

With regard to wideband active loop antennas; generally the A F is constant within a few dB over most of the design bandwidth. This statement is based an calibration data provided by Mectronics Marine in the UK who calibrate some of my loop antennas.

Kind regards

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Wednesday, April 27, 2016 2:00 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Schematic for loop amplifier

This may be a bit confusing, so I'll try to remember to sign my posts as Rick C.

Antenna Factor with a fixed impedance receiver input of 50 ohms is defined as AF = 9.73 / (Lambda * G) where G is the antenna gain.

This formula accounts for the impedance mismatch between the antenna and receiver. So the AF still varies with frequency. Using a receiver with even lower input impedance than 50 ohms only changes the constant from 9.73 to another, higher value. Antenna Gain is a function of the radiation pattern and not related to the radiation resistance. As long as the antenna size is small compared to lambda the gain will not vary much.

By definition the antenna factor always changes with frequency.

Rick C.

---In loopantennas@yahoogroups.com, <andrew.ikin@...> wrote :

Rick wrote on April 27.

snip<The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?>

Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier.

However, the loss due to loop/amp. miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp. will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.

73

Andrew Ikin

11398. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 18:37:37 UTC
From: gnuarm.2007@...
Topic: 11381 Message: 11398

Factoring in capacitance and inductance is why it's called impedance rather than resistance. Don't worry so much about the details of what is going on with the capacitance and inductance, it's all factored into the definition of impedance. Pick a frequency and it's very similar to resistance.... unless you hit a resonance point.

Rick C.

---In loopantennas@yahoogroups.com, <ferrox4@...> wrote :

Thanks for the explanation, that helped a lot. With a dc source and resistance it's very straight forward. Throw in an ac signal, inductance, capacitance and all
The combinations on top of resistance and all of a sudden it's not so straight forward.

11399. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 18:54:56 UTC
From: Andrew Ikin
Topic: 11381 Message: 11399
Attachments: 1 described; binary payloads are missing from this source WARC

Jef,

I can’t comment on Chavdar’s antenna design because I haven’t used it. With the Wellbrook loops the amplifier input Z is set by using negative feedback. Hence, it is possible to set the input Z to raise with an increase with the loops reactive with frequency to minimise the loop/amp. miss-match verse frequency. In fact I do have a loop prototype loop amp. that perfectly tracks a 1m loop Z from 0.5MHz to 30MHz. However, the 2dB improvement in the HF sensitivity compared to the ALA1530 doesn’t warrant the additional complexity. Also the ALA1530 has now been overtaken by the FET LN versions which offer much better performance and amp. noise figures of less than 0.2dB.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Wednesday, April 27, 2016 1:31 PM
To: loopantennas@yahoogroups.com
Subject: RE: [loopantennas] Re: Schematic for loop amplifier

Good morning Andrew, Chavdar,

I fully understand the theory and logic of using a low Z and more so when you are talking about the lower frequencies. The various low Z amplifiers that I built all give very, very strong signals at the lower frequencies up to and including the 7 Mhz band. However at 14 Mhz the signal strength tends to go down and at 21 and 28 Mhz there is a very serious reduction in signal strength. Yes I can copy stations and the big guns in the CB band at 27.025 Mhz from California are loud (S 9) in Florida and so are the various AM broadcast stations. Lower power amateurs in the higher bands are however disappointing and are much easier to receive with a flag antenna that I have in the attic.

The only logic I see here is that the impedance goes up much faster than the increase in radiation resistance. Chris Trask in his papers shows a graph of the impedance increase which shows a very steep increase around 14 Mhz which seems to confirm my own findings. I think that it is very unlikely that you get a constant antenna factor up to 30Mhz with a low Z amplifier. Whether this is due to various resonances I do not know.

To receive amateur stations in the 14Mhz up to 28Mhz bands I get much better results by using a differential amplifier with a much higher Z and by using a 4:1 input balun in order to reduce the impedance at the loop ends. Using an MFJ antenna analyzer I do get values of some 200 -350 ohms impedance at the loop ends over the frequency range from 14-28Mhz.

BTW I am using a 90cm diameter low impedance loop (alu strip of 1 inch). The inductance of the loop measured with an LC meter gave me a value of 1.7 microhenry.

Anyway I am having fun with these loops,

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, April 27, 2016 5:51 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Schematic for loop amplifier

Rick wrote on April 27.

snip<The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?>

Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier. However, the loss due to loop/amp. miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp. will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.

73

Andrew Ikin

11400. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 22:23:28 UTC
From: lz1aq@...
Topic: 11381 Message: 11400

Hi to Rick and ……
Loop Amplifier
The low impedance load to a small loop is needed to achieve flat wideband response. The loop must work almost in short circuit mode. If the loop is small, its current is calculated simply by the Faraday's law where the short circuit current does not depends on frequency. I am not a professional in antennas and I cannot make easily link between Faraday law and antenna gain . Also we do not need to assume the radiation resistance – it is so small that it does influences at all the loop current. I think that the theory is very simple until the loop perimeter is much shorter than the wavelength.
In my spice models of the amplifier, the loop is represented as a frequency independent current source and it is a good approximation above certain frequency. The upper frequency limit is up to where the transmission line effects cannot be ignored. The loop amplifier is a current to voltage transducer. There is no impedance matching . The Low-Z wideband loop amplifier is just complementary to Hi-Z short dipole (whip) wideband amplifier.
The main problem is whether we can achieve amplifier noise floor which is below the atmospheric noise level in this particular case. My own observations is that this is possible up to 15 – 20 MHz . On higher bands, in quiet rural locations, the atmospheric noise is very low. There the active loop sensitivity is limited by the amplifier internal noise. So there we must use loops with higher short circuit current. One solution is to use crossed coplanar loops where we can increase loop current and preserve at the same time small loop pattern and to have sharp nulls for the local noise sources.
The common base balanced amplifier that I am using is one of the active wideband loop solutions. It has approximately 6 ohms input impedance and will give flat response above 150 KHz with loop inductance in order of 2 to 4 uH. An amplifier with 50 ohms input will be flat above 1.5 MHz. The very low input impedance has another benefit – there is no need to use shielded loop since the loop is very well balanced with sharp and symmetric null.
Other designs might reduce the active antenna noise floor further on. One possible solution is to have an amplifier whose input impedance is always e.g. one tenth of the loop impedance. That means the amplifier must have linearly increasing input impedance with frequency. Thus we will have 10 % impedance matching in the total bandwidth, preserving the flat frequency response at the same time. This will be not bad for a wideband RX antenna.
For those who are interested in details about these topics look at www.lz1aq.signacor.com .

Crystal Radio
The answer is again an impedance matching. The crystal radio output impedance is high - equal to the equivalent resistance of a the high Q parallel circuit loaded with the antenna impedance. I remember in my childhood (I was 10 years old when I made my first crystal radio) , the high impedance earphones were in order of 4000 ohms which was probably near to the crystal detector impedance. This is almost the same problem as in the active loop.
Active loop is equivalent to a crystal radio loaded with 6 ohms earphones J
Chavdar LZ1AQ lz1aq@abv.bg

---In loopantennas@yahoogroups.com, <richard@...> wrote :

On 4/26/2016 1:59 PM, lz1aq@... mailto:lz1aq@... [loopantennas] wrote:
>

> Wideband Active Small Magnetic Loop Antenna
>
> http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
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>
> 73 Chavdar LZ1AQ
>

The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?

Rick N6RK

11401. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 22:54:50 UTC
From: crabtreejr@...
Topic: 11381 Message: 11401

For basic theory, see also:
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/3411

73 John KC0G

-----Original Message-----
From: lz1aq@... , Sent: Wed, Apr 27, 2016 5:23 pm

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Chavdar LZ1AQ lz1aq@...

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On 4/26/2016 1:59 PM, lz1aq@... [loopantennas] wrote:

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The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?

Rick N6RK

11402. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 14:52:44 UTC
From: Steve Frost
Topic: 11381 Message: 11402

Probably the easiest way to visualize impedance matching is to use an analogy with a direct current circuit. Think of the antenna as being a source of electrical current...like a 1.5 volt battery. Then think of the headphones as being a load across the battery such as a resistor.

The battery cannot supply an unlimited amount of current. for example, ohms law would tell us that if you place a 1.5 ohm resistor across the battery
you would get one amp of current. But we know that we will not get that much current from a 1.5V triple a cell. This is because the battery has an internal resistance
that limits the amount of current you can get out of it.

Now lets look at a case where a very high resistance is placed across the battery...one million ohms. Without doing the math, we know that the current being drawn from the battery is going to be very small...nowhere near what the battery can supply.

So it stands to reason that there is an optimum value of resistor that we can place across the battery that will ensure the greatest amount of " POWER" (voltage X current) will be transferred from the battery to the resistor.

Likewise, the crystal radio is a very high impedance (Like high internal resistance) and it can only supply a very small amount of current. Therefore the headphones must also be very high impedance (like the resistor) so that the most
amount of power can be transferred from the radio to the phones.

I hope this helps....it sure helped me when I was studying this stuff.

Regards..Steve VE9SF

On 4/27/2016 10:45 AM, ferrox4@... [loopantennas] wrote:
> I have a hard time grasping the theory of impedance. Here's a question I have for the group or anyone who wishes to answer it. Why in a crystal radio set is it better to have high impedance headphones vs. low impedance headphones to hear the signal. Wouldn't the low impedance headphones allow for the tiny signal to pass easier, where as the high impedance would block the signal? I know it's a stupid question, but I wish someone could explain impedance in layman's terms.
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>> 73
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>> Andrew Ikin
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11403. RE: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 19:26:37 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11381 Message: 11403
Attachments: 1 described; binary payloads are missing from this source WARC

Thanks Andrew,

Your explanation is clear now and makes sense. I have seen amplifiers where they use inductors in the emitter which indeed should raise the Z in at higher frequencies. I will give that approach a shot before I jump on the Fet approach. This will keep me busy for a while…

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, April 27, 2016 2:55 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Schematic for loop amplifier

Jef,

I can’t comment on Chavdar’s antenna design because I haven’t used it. With the Wellbrook loops the amplifier input Z is set by using negative feedback. Hence, it is possible to set the input Z to raise with an increase with the loops reactive with frequency to minimise the loop/amp. miss-match verse frequency. In fact I do have a loop prototype loop amp. that perfectly tracks a 1m loop Z from 0.5MHz to 30MHz. However, the 2dB improvement in the HF sensitivity compared to the ALA1530 doesn’t warrant the additional complexity. Also the ALA1530 has now been overtaken by the FET LN versions which offer much better performance and amp. noise figures of less than 0.2dB.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Wednesday, April 27, 2016 1:31 PM
To: loopantennas@yahoogroups.com<mailto:loopantennas@yahoogroups.com>
Subject: RE: [loopantennas] Re: Schematic for loop amplifier

Good morning Andrew, Chavdar,
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The only logic I see here is that the impedance goes up much faster than the increase in radiation resistance. Chris Trask in his papers shows a graph of the impedance increase which shows a very steep increase around 14 Mhz which seems to confirm my own findings. I

think that it is very unlikely that you get a constant antenna factor up to 30Mhz with a low Z amplifier. Whether this is due to various resonances I do not know.
To receive amateur stations in the 14Mhz up to 28Mhz bands I get much better results by using a differential amplifier with a much higher Z and by using a 4:1 input balun in order to reduce the impedance at the loop ends. Using an MFJ antenna analyzer I do get values of some 200 -350 ohms impedance at the loop ends over the frequency range from 14-28Mhz.
BTW I am using a 90cm diameter low impedance loop (alu strip of 1 inch). The inductance of the loop measured with an LC meter gave me a value of 1.7 microhenry.
Anyway I am having fun with these loops,
Jef
From: loopantennas@yahoogroups.com<mailto:loopantennas@yahoogroups.com>
[mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, April 27, 2016 5:51 AM
To: loopantennas@yahoogroups.com<mailto:loopantennas@yahoogroups.com>
Subject: Re: [loopantennas] Re: Schematic for loop amplifier

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Andrew Ikin

11404. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-28 00:29:02 UTC
From: lz1aq@...
Topic: 11381 Message: 11404

Hi John,
Thank you very much for the link. I was not aware of your 2007 posting and I cannot add a word to it. It is already in my archive!
with best regards,
Chavdar lz1aq@abv.bg

For basic theory, see also:
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/3411

73 John KC0G

11405. RE: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-28 00:45:16 UTC
From: lz1aq@...
Topic: 11381 Message: 11405

I have posted this message earlier but it does not appear in the forum by unknown reasons. Excuse me for doubling if the earlier message appears.
Hi Jef,
You (and Chris) are right that above certain frequency the loop is not small and begin to act as a normal antenna and the “simple” loop theory does not work anymore. Single 1 m loop at 20 MHz has almost wl/4 perimeter. Its polarization pattern is quite different with strong horizontal component and probably it needs height to have sufficient sensitivity.
Have you tested crossed coplanar loops? If you make another 1m diam. loop and connect both as described in my article you probably will have the following:
- The signal level will increase with 4 -5 dB (theoretically 6 dB).
- The loop pattern will be as a small loop up to 50 Mhz.
- The loop will have also at higher frequencies sharp nulls for local vertically polarized noise.
- The crossed loop inductance will be almost twice lower.
- But in order to benefit from the crossed loops, the input impedance of the amplifier must be several times lower than the loop impedance. The idea is to have two current sources which are added into common load (the amp. input) . Otherwise the loop currents begin to flow between both loops, not into the amplifier input. In this case you might get better results with a single loop with the same total area. I cannot predict what will be the impedance of these crossed loops at higher frequencies and any feedback is welcome.
- For experiments you can use a wideband input transformer to lower the input impedance of an ordinary 50 ohms amplifier in order to fulfill the requirements for the crossed loops.
Have a fun,
Chavdar lz1aq@abv.bg

11406. RE: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-27 23:57:56 UTC
From: lz1aq@...
Topic: 11381 Message: 11406

Hi Jef,
You (and Chris) are right that above certain frequency the loop is not small and begin to act as a normal antenna and the “simple” loop theory does not work anymore. Single 1 m loop at 20 MHz has almost wl/4 perimeter. Its polarization is quite different with strong horizontal component and probably it needs height to have sufficient sensitivity.
Have you tested crossed coplanar loops? If you make another 1m diam. loop and connect both as described in my article you probably will have the following:
- - The signal level will increase with 4 -5 dB (theoretically 6 dB).
- - The loop pattern will be as a small loop up to 50 Mhz.
- - The loop will work near the ground at higher frequencies with sharp nulls for local vertically polarized noise.
- - The crossed loop inductance will be almost twice lower.
- - But in order to benefit from the crossed loops, the input impedance of the amplifier must be several times lower than the loop impedance. The idea is to have two current sources which are added into common load (the amp. input) . Otherwise the loop currents begin to flow between both loops not into the amplifier input. In this case you might get better results with a single loop with the same total area. I cannot predict what will be the impedance of these crossed loops at higher frequencies and any feedback is welcome.
- For experiments you can use a wideband input transformer to lower the input impedance of an ordinary 50 ohms amplifier in order to fulfill the requirements for the crossed loops.
Have a fun,
Chavdar lz1aq@abv.bg

11407. RE: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-28 11:31:02 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11381 Message: 11407
Attachments: 3 described; binary payloads are missing from this source WARC

Good afternoon Chavdar,

Thank you so much for your clear explanation. I do find indeed that using input transformers is one way to make the loop respond to higher or lower frequencies. I have experimented with crossed loops as well with variable results but that was most likely due to the fact that I did not get the understanding of what is really happening in a loop with the inductance when you operate the loop in short circuit mode. But I am learning and I see progress almost every week.
Thanks also to Andrew Ikin and KCOG for explaining us the way forward.

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, April 27, 2016 8:45 PM
To: loopantennas@yahoogroups.com
Subject: RE: [loopantennas] Re: Schematic for loop amplifier

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- The loop will have also at higher frequencies sharp nulls for local vertically polarized noise.

- The crossed loop inductance will be almost twice lower.

- But in order to benefit from the crossed loops, the input impedance of the amplifier must be several times lower than the loop impedance. The idea is to have two current sources which are added into common load (the amp. input) . Otherwise the loop currents begin to flow between both loops, not into the amplifier input. In this case you might get better results with a single loop with the same total area. I cannot predict what will be the impedance of these crossed loops at higher frequencies and any feedback is welcome.

- For experiments you can use a wideband input transformer to lower the input impedance of an ordinary 50 ohms amplifier in order to fulfill the requirements for the crossed loops.
Have a fun,

Chavdar lz1aq@abv.bg

11408. Re: [loopantennas] Re: Schematic for loop amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-28 13:54:38 UTC
From: ferrox4@...
Topic: 11381 Message: 11408

I agree jef, I'm
Learning a ton here re: antennas, circuit and component analysis. Great forum!

Sent from my iPhone

> On Apr 28, 2016, at 7:31 AM, "'Jef Verborgt, Contractor, Code 6138' jozef.verborgt.ctr@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Good afternoon Chavdar,
>
>
>
> Thank you so much for your clear explanation. I do find indeed that using input transformers is one way to make the loop respond to higher or lower frequencies. I have experimented with crossed loops as well with variable results but that was most likely due to the fact that I did not get the understanding of what is really happening in a loop with the inductance when you operate the loop in short circuit mode. But I am learning and I see progress almost every week.
>
> Thanks also to Andrew Ikin and KCOG for explaining us the way forward.
>
>
>
> Jef
>
>
>
> From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
> Sent: Wednesday, April 27, 2016 8:45 PM
> To: loopantennas@yahoogroups.com
> Subject: RE: [loopantennas] Re: Schematic for loop amplifier
>
>
>
>
>
> I have posted this message earlier but it does not appear in the forum by unknown reasons. Excuse me for doubling if the earlier message appears.
>
>
>
> Hi Jef,
>
> You (and Chris) are right that above certain frequency the loop is not small and begin to act as a normal antenna and the “simple” loop theory does not work anymore. Single 1 m loop

at 20 MHz has almost wl/4 perimeter. Its polarization pattern is quite different with strong horizontal component and probably it needs height to have sufficient sensitivity.
>
> Have you tested crossed coplanar loops? If you make another 1m diam. loop and connect both as described in my article you probably will have the following:
>
> - The signal level will increase with 4 -5 dB (theoretically 6 dB).
>
> - The loop pattern will be as a small loop up to 50 Mhz.
>
> - The loop will have also at higher frequencies sharp nulls for local vertically polarized noise.
>
> - The crossed loop inductance will be almost twice lower.
>
> - But in order to benefit from the crossed loops, the input impedance of the amplifier must be several times lower than the loop impedance. The idea is to have two current sources which are added into common load (the amp. input) . Otherwise the loop currents begin to flow between both loops, not into the amplifier input. In this case you might get better results with a single loop with the same total area. I cannot predict what will be the impedance of these crossed loops at higher frequencies and any feedback is welcome.
>
> - For experiments you can use a wideband input transformer to lower the input impedance of an ordinary 50 ohms amplifier in order to fulfill the requirements for the crossed loops.
>
> Have a fun,
>
> Chavdar lz1aq@...
>
>
>
>
>

11409. CapCo AMA-4 parts for sale

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-04-30 10:16:41 UTC
From: Paul Young G0HWC
Topic: 11409 Message: 11409

Hi all, I am selling my 12ft mag loop
for full details and photos look here:
http://www.g0hwc.com/for-sale-ham-radio.html
This is located in Essex UK and will need collecting.

Paul G0HWC

Please email me direct or 07810-607766

11410. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-01 13:29:10 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11410

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11411. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-01 13:29:10 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11411

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11412. PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-01 20:54:25 UTC
From: ktjensen1994@...
Topic: 11412 Message: 11412

Does anyone have some simple plans for a PVC frame that can be built cheap to start experimenting with loop antennas? Just need a cookie cutter approach instructions if that's possible.

N1KTJ

11413. MFJ-9232 any discussion?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-01 20:57:00 UTC
From: ktjensen1994@...
Topic: 11413 Message: 11413

Has anyone made good use of the MFJ 9232 loop antenna capacitor? I am considering it because of the price. Will likely switch to copper tubing instead of the included wire with it. Sure its QRP power but the price of $60 can't be beat compared to almost anything else.

11414. Re: [loopantennas] MFJ-9232 any discussion?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-02 05:04:23 UTC
From: vk2tti@...
Topic: 11413 Message: 11414

G'day kj, regarding the MFJ9232 loop tuner. I've had one for about six months. You get what you pay for. I am pleased with my purchase. Tuneing and matching is very course, no fine tuneing available. For receiving its no problem when tuneing by ear. However when using an antenna analyser the courseness of adjustment can be frustrating. I bought the device to use with an FT817 and for SWL. Hand capacitane don't seem to present a problem. A large copper pipe loop would need extra support, the loop tuner has only a small footprint, it would be unstable. Hope this helps, Regards Max vk2tti.
PS I also have an MFJ-936B, it won't fit in my pocket like the 9232.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
01 May 2016 13:57:00 -0700
Subject:
[loopantennas] MFJ-9232 any discussion?

Has anyone made good use of the MFJ 9232 loop antenna capacitor? I am considering it because of the price. Will likely switch to copper tubing instead of the included wire with it. Sure its QRP power but the price of $60 can't be beat compared to almost anything else.

Email sent using Optus Webmail

Links:
---
[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11413;_ylc=X3oDMTJyZ2c5amwzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTQxMwRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0NjIxNTM0OTU-?act=reply&messageNum=11413
[2]
mailto:ktjensen1994@...?subject=Re%3A%20MFJ-9232%20%20any%20discussion%3F
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20MFJ-9232%20%20any%20discussion%3F
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmbmIzNzk4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0NjIxNTM0OTU-

[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11413;_ylc=X3oDMTM3YTM3dHJoBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTQxMwRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0NjIxNTM0OTUEdHBjSWQDMTE0MTM-
[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmZmYycHZxBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0NjIxNTM0OTU-
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[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11415. Re: [loopantennas] PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-02 05:19:59 UTC
From: vk2tti@...
Topic: 11412 Message: 11415

G'day again N1KTJ, PVC loop supports, Indoor? Outdoor? etc. When I bought the MFJ -936B on the MFJ website there were suggestions and detailed instructions for a versatile PVC loop support, as well Google PVC loop supports and see what you get. Images they say are worth a thousand words. Better than text Irecon. Regards again Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
01 May 2016 13:54:25 -0700
Subject:
[loopantennas] PVC self standing frame for loops - any plans?

Does anyone have some simple plans for a PVC frame that can be built cheap to start experimenting with loop antennas? Just need a cookie cutter approach instructions if that's possible.

N1KTJ

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11412;_ylc=X3oDMTJyaWtpbzNzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTQxMgRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0NjIxNTM0ODI-?act=reply&messageNum=11412
[2]
mailto:ktjensen1994@...?subject=Re%3A%20PVC%20self%20standing%20frame%20for%20loops%20-%20any%20plans%3F
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20PVC%20self%20standing%20frame%20for%20loops%20-%20any%20plans%3F
[4]
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DZnRyBHNsawN2dHBjBHN0aW1lAzE0NjIxNTM0ODIEdHBjSWQDMTE0MTI-
[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
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https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmOG5pNGg5BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0NjIxNTM0ODI-
[11]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnczZvNzdlBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDYyMTUzNDgy
[12]
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[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11416. Re: [loopantennas] PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-02 09:21:03 UTC
From: Everett Sharp
Topic: 11412 Message: 11416

Go to Lowe's or Home Depot and look for PEX pipe. It is a polyethylene pipe and can easily be formed into a circle. Get it in either 3/4" or 1". Also look at electrical junction boxes to use as a base for the loop. Then you can either put a wire, or coax inside for the loop.

Everett N4CY

Sent from my iPad

> On May 1, 2016, at 3:54 PM, ktjensen1994@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Does anyone have some simple plans for a PVC frame that can be built cheap to start experimenting with loop antennas? Just need a cookie cutter approach instructions if that's possible.
>
>
>
> N1KTJ
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>
>
>

11417. Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-02 13:20:40 UTC
From: ktjensen1994@...
Topic: 11412 Message: 11417

yes it would be indoors. I am thinking of the MFJ-935B to buy. Just need a way to get it all stable and mounted. Sure the loop will have a PVC frame as they suggest, but then the whole assemble together seems so wobbly and flimsy.

Am thinking about a simple mount of the MFJ-935B to a plastic portable table. Or thinking of a mount of that unit to a camera tripod with a quick connect foot. Do not know if I have seen a MFJ-935B on a camera tripod mount yet, but that may be because the tripod would detune the loop.

11418. Re: MFJ-9232 any discussion?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-02 13:24:48 UTC
From: ktjensen1994@...
Topic: 11413 Message: 11418

Thanks Maxwell. You cleared that up for me. that the fine tuning needed is not possible with the small portable, and that I would be in for some frustration if I was trying to hit a specific frequency. That's exactly what I would be doing. Trying to get the exact frequency I need for JT65 operation. If I can't hit that frequency I am stuck with no solution.

Will avoid this one then, and go for the $200 solution.

11419. Re: [loopantennas] Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 02:38:35 UTC
From: Maxwell Mclellan
Topic: 11412 Message: 11419

G'day kj, I've had a 936B for some time and have been happy with it. Loop antennas have a directional property. I place the radio and battery on a "lazy susan", on top of the radio I place the loop tuner, on top of the tuner I place the indoor antenna. The whole setup can be rotated to advantage. Max vk2tti. PS one of the blokes at the Men's Shed said he had a lazy susan be he divorced her Hi Hi.

Sent from my iPad

> On 2 May 2016, at 11:20 pm, "ktjensen1994@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> yes it would be indoors. I am thinking of the MFJ-935B to buy. Just need a way to get it all stable and mounted. Sure the loop will have a PVC frame as they suggest, but then the whole assemble together seems so wobbly and flimsy.
>
>
>
> Am thinking about a simple mount of the MFJ-935B to a plastic portable table. Or thinking of a mount of that unit to a camera tripod with a quick connect foot. Do not know if I have seen a MFJ-935B on a camera tripod mount yet, but that may be because the tripod would detune the loop.
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11420. Re: [loopantennas] Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 08:51:52 UTC
From: ktjensen1994@...
Topic: 11412 Message: 11420

too cute about the divorced lazy susan. but smart.

11421. Re: [loopantennas] Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 08:52:44 UTC
From: ktjensen1994@...
Topic: 11412 Message: 11421

any chance you can post a picture?

11422. Re: [loopantennas] PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 09:25:36 UTC
From: gnuarm.2007@...
Topic: 11412 Message: 11422

If you want to use PEX there is a type that has a layer of aluminum between two layers of PEX. It is called "PEX-AL-PEX". The purpose is to keep oxygen out of a heating system. It is sold for floor mounted heating systems. With the aluminum layer it should be stiffer than plain plastic tubing.

By using this you can run your wires through the tubing with the PEX giving you some spacing from the aluminum to reduce the capacitance and you get a shielded loop which is good for reception! You would need to remove some of the outer layer of the PEX in the middle of the loop to make a ground connection and a hole to bring your wires out for the loop.

Or are you building a transmitting loop?

Rick C.

---In loopantennas@yahoogroups.com, <everettsharp@...> wrote :

Go to Lowe's or Home Depot and look for PEX pipe. It is a polyethylene pipe and can easily be formed into a circle. Get it in either 3/4" or 1". Also look at electrical junction boxes to use as a base for the loop. Then you can either put a wire, or coax inside for the loop.

Everett N4CY

Sent from my iPad

On May 1, 2016, at 3:54 PM, ktjensen1994@... mailto:ktjensen1994@... [loopantennas] <loopantennas@yahoogroups.com mailto:loopantennas@yahoogroups.com> wrote:

Does anyone have some simple plans for a PVC frame that can be built cheap to start experimenting with loop antennas? Just need a cookie cutter approach instructions if that's possible.

N1KTJ

11423. RE: [loopantennas] Re: Schematic for loop amplifier / pros and cons of wideband vs tuned

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 10:41:24 UTC
From: Leigh Turner
Topic: 11381 Message: 11423

This discussion thread is a very interesting one.

For typical MF/HF ham band use I cannot see the virtue of wideband active Rx loops; in a past life I used to design and deploy carefully balanced Rx loops (TEMPEST and covert ELINT intelligence signals gathering / SIGINT stuff for certain unmentionable government agencies) with extremely high common-mode rejection ratios and reduction in E-field sensitivity. Some of these Rx antennas were active loops tuned using wide capacitance range / hyper-abrupt junction high-Q variable capacitance / semiconductor varactor diodes for remotely tuning the loop in combination with a wide dynamic range unity-gain FET buffer to transform the resultant high dynamic parallel impedance down to 50 Ohm.

This circuit configuration achieves an extraordinarily high power gain due to the Q-multiplied open-circuit signal voltage across the high impedance loop gap being transformed to nearly the same voltage across a 50 Ohm load. Of particularly significance however is the dramatic gain in SNR / sensitivity resulting from the "swamping" of the FET thermal KTB input noise by the Q-gain (say 400) of the tuned loop circuit; a dramatic level of improvement unobtainable from the alternative combined use of a passive matching network and a low-noise amplifier or Racal / Harris receiver with an equivalent input noise of 50 Ohms (3 dB noise figure). The technique works well from VLF thro' to HF and will detect weak signals previously thought to be irretrievable from the prevailing environmental noise.

Unlike overload and spur vulnerable wideband loops you don't need a pre-amp with a very high intercept IP3 if you do the feed impedance translation, and exploit the loop's natural high Q and selectivity and deep polar pattern nulls to reject local noise sources.

This is a neat way to simultaneously achieve an ultra low noise floor and wide dynamic range / intercept point. There's a penalty to be paid for an un-tuned wideband loop; besides tuning to resonance is no big deal if it's done electronically by cranking a pot to set the varactor voltage. The resultant high-Q pre-selector bandpass filter on the Rx front-end can help a lot. The external atmospheric noise will always dominate that of the KTB noise floor of the loop's internal active circuitry; even up at 30 MHz.

Symmetry and balance is always very important if you want to exploit the Rx loop's potentially excellent noise / QRM rejection properties.

Balanced and rotatable small HF loop antennas are also effective at greatly reducing the reception of such localized man-made noise in the lower HF bands. The "low impedance" of the loop structure dramatically reduces man-made noise from being received by the electrostatic induction mode which

often renders "high impedance" dipoles and monopoles useless for weak signal detection in congested urban locations. The main ingredient of local man made noise is quasi-static electric field energy which decays rapidly with distance. As the impedance the magnetic H-field responsive loop presents to an incoming signal is very low compared to a dipole, its balance with respect to ground tends to be preserved whereas the high impedance ends of the dipole are easily disturbed by any inevitable asymmetry in the local environment. Of course a vertical monopole or whip is the most susceptible of all antenna types to man made noise; its susceptibility exacerbated by a typical ground plane of limited size or conductivity. Below say 5 MHz, SNR differences / improvements of 30 dB or more are not uncommon when comparing a good balanced H-field loop to an E-field responsive vertical whip!

An interesting design to contemplate might be to combine broadband and tuned designs into a switchable circuit. A single loop element would be switched between a broadband amp and a varactor-tuned amp. Broadband mode could be used for band scanning while tuned mode could be used to dig out weak signals or combat strong co-channel interference and mitigate QRM.

With such switching the loop between broadband and varactor-tuned modes one can achieve the best of both worlds and be able to exploit their relative merits as the particular need arises.

You'll notice quite a difference in antenna and SNR performance in the tuned loop mode...

Hope forum readers find this interesting and inspiring to try the concepts.

Cheers,

Leigh
VK5KLT

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Thursday, 28 April 2016 4:25 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Schematic for loop amplifier

Jef,

I can□t comment on Chavdar□s antenna design because I haven□t used it. With the Wellbrook loops the amplifier input Z is set by using negative feedback. Hence, it is possible to set the input Z to raise with an increase with the loops reactive with frequency to minimise the loop/amp. Miss-match verse frequency. In fact I do have a loop prototype loop amp. That perfectly tracks a 1m loop Z from 0.5MHz to 30MHz. However, the 2dB improvement in the HF sensitivity compared to the ALA1530 doesn□t warrant the additional complexity. Also the ALA1530 has now been overtaken by the FET LN versions which offer much better performance and amp. Noise figures of less than 0.2dB.

73

Andrew

From: mailto:loopantennas@yahoogroups.com
Sent: Wednesday, April 27, 2016 1:31 PM
To: loopantennas@yahoogroups.com
Subject: RE: [loopantennas] Re: Schematic for loop amplifier

Good morning Andrew, Chavdar,

I fully understand the theory and logic of using a low Z and more so when you are talking about the lower frequencies. The various low Z amplifiers that I built all give very, very strong signals at the lower frequencies up to and including the 7 MHz band. However at 14 MHz the signal strength tends to go down and at 21 and 28 MHz there is a very serious reduction in signal strength. Yes I can copy stations and the big guns in the CB band at 27.025 MHz from California are loud (S 9) in Florida and so are the various AM broadcast stations. Lower power amateurs in the higher bands are however disappointing and are much easier to receive with a flag antenna that I have in the attic.

The only logic I see here is that the impedance goes up much faster than the increase in radiation resistance. Chris Trask in his papers shows a graph of the impedance increase which shows a very steep increase around 14 MHz which seems to confirm my own findings. I think that it is very unlikely that you get a constant antenna factor up to 30 MHz with a low Z amplifier. Whether this is due to various resonances I do not know.

To receive amateur stations in the 14 MHz up to 28 MHz bands I get much better results by using a differential amplifier with a much higher Z and by using a 4:1 input balun in order to reduce the impedance at the loop ends. Using an MFJ antenna analyzer I do get values of some 200-350 ohms impedance at the loop ends over the frequency range from 14-28 MHz.

BTW I am using a 90cm diameter low impedance loop (alu strip of 1 inch). The inductance of the loop measured with an LC meter gave me a value of 1.7 microhenry.

Anyway I am having fun with these loops,
Jef

Posted by: Chris Trask <christrask@...>

Back when I first looked into wideband active loops, I learned by way of EZNEC that the radiation pattern deteriorated quickly as the terminal impedance was increased. It made sense when considering that the loop antenna is a current source, not a voltage source. This made the design of the amplifier very simple as no matching network was needed, just a low input impedance amplifier.

>>
>> Wideband Active Small Magnetic Loop Antenna
>>

>>
http://www.lz1aq.signacor.com/docs/wsml/wideband-active-sm-loop-antenna.htm
>>
>> 73 Chavdar LZ1AQ

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, April 27, 2016 5:51 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: Schematic for loop amplifier

Rick wrote on April 27.

snip <The cited article states:

"This amplifier must be with very low input impedance."

Why does the input impedance need to be very low?>

Rick, at low frequencies a small loop is a low impedance current source and hence, the best impedance match would be an amplifier with a similar input z. As the frequency increases, the loop impedance increases, so there is a miss-match with the low impedance amplifier. However, the loss due to loop/amp miss-match is compensated by the increase loop output power because the radiation resistance increases with rising frequency. This feature effectively means that the loop/amp will provide a constant Antenna Factor verses frequency. This is how most broadband loops work.

73
Andrew Ikin

Posted by: Andrew Ikin <andrew.ikin@...>

++snip++

11424. Re: MFJ-9232 any discussion?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 15:48:50 UTC
From: Robert Cavanaugh
Topic: 11413 Message: 11424

Check out K1FM. He built a small loop tuner for 817. It is very similar to one I am planning on.
I bought two Vernier knobs from Henry electronics in Los Angeles with a 10:1 turn ratio. I am pretty sure I won't have any tuning issues.

73
Bob Cavanaugh Ag6yk

11425. Re: MFJ-9232 any discussion?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 17:13:49 UTC
From: ktjensen1994@...
Topic: 11413 Message: 11425

Thanks Bob - K1FM.us | K1FM Mini Magnetic Loop
http://k1fm.us/2014/06/k1fm-mini-magnetic-loop/

http://k1fm.us/2014/06/k1fm-mini-magnetic-loop/

K1FM.us | K1FM Mini Magnetic Loop http://k1fm.us/2014/06/k1fm-mini-magnetic-loop/ K1FM Mini Magnetic Loop

View on k1fm.us http://k1fm.us/2014/06/k1fm-mini-magnetic-loop/
Preview by Yahoo

11426. Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-03 15:44:25 UTC
From: Robert Cavanaugh
Topic: 11412 Message: 11426

Hi All
I have a MFJ935B that I use indoors. The lazy Susan is a great idea. If you go with copper tubing you will need a support for anything larger than about a five foot circumference loop. I made one from scratch, takes about 1/2 hour and about 5 dollars from home depot. I made a bracket to fit the pvc fitting on the top of the tuner and put a crosspiece in so that I could add support legs on each side of the tuner. On the top of the cross piece I have a long piece and a top support like a pvc inverted L. The loops are supported from the top using cable ties hooked to the top piece. The long vertical has two sets of couplings so I can make it the height needed for a 7 foot and a 10 foot circumference loop. I didnt use any plans, sketched out a rough plan and then needed to custom fit things. I have never been able to have pvc match the math, some fittings work great others always are either a little too long or short. Always get it right before cementing

Also. If you use a loop tuner, make sure you have it on a non-comductive surface otherwise you can detune it

73
Bob Cavanaugh
Ag6yk

11427. Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-04 09:47:43 UTC
From: ktjensen1994@...
Topic: 11412 Message: 11427

bob - can you email me pictures? my email address is in QRZ.

N1KTJ
Kevin

11428. Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-04 10:29:26 UTC
From: ktjensen1994@...
Topic: 11412 Message: 11428

this guy put is mfj935B on a camera tripod. which is what I want to do. But of course he also posts that he does not want to be bothered with emails about how he did anything. Seems top be a trend with folks who are creative.

DG2IAQ Callsign Page https://www.qrz.com/db/DG2IAQ

https://www.qrz.com/db/DG2IAQ

DG2IAQ Callsign Page https://www.qrz.com/db/DG2IAQ DG2IAQ personal biography

View on www.qrz.com https://www.qrz.com/db/DG2IAQ
Preview by Yahoo

11429. Re: [loopantennas] Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-04 05:15:34 UTC
From: vk2tti@...
Topic: 11412 Message: 11429

G'day all. To work the lazy susan. Place an index mark on the moveing part of the susan. Rotate the structure to the point where you just lose the required signal. Place a finger or marker on the table top under the index mark. Rotate the structure through the point of maximum reception until you just lose the signal again. The point of maximum signal lies between your finger and the present position of the index mark on the susan. Regards to all Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:

Sent:
Tue, 03 May 2016 08:44:25 -0700
Subject:
[loopantennas] Re: PVC self standing frame for loops - any plans?

Hi All
I have a MFJ935B that I use indoors. The lazy Susan is a great idea. If you go with copper tubing you will need a support for anything larger than about a five foot circumference loop. I made one from scratch, takes about 1/2 hour and about 5 dollars from home depot. I made a bracket to fit the pvc fitting on the top of the tuner and put a crosspiece in so that I could add support legs on each side of the tuner. On the top of the cross piece I have a long piece and a top support like a pvc inverted L. The loops are supported from the top using cable ties hooked to the top piece. The long vertical has two sets of couplings so I can make it the height needed for a 7 foot and a 10 foot circumference loop. I didnt use any plans, sketched out a rough plan and then needed to custom fit things. I have never been able to have pvc match the math, some fittings work great others always are either a little too long or short. Always get it right before cementing

Also. If you use a loop tuner, make sure you have it on a non-comductive surface otherwise you can detune it

73
Bob Cavanaugh
Ag6yk

Email sent using Optus Webmail

Links:
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[1]
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[2]
mailto:osianfion@...?subject=Re%3A%20PVC%20self%20standing%20frame%20for%20loops%20-%20any%20plans%3F
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20PVC%20self%20standing%20frame%20for%20loops%20-%20any%20plans%3F
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https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmaTY4aHVzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0NjIyOTY0NTQ-
[5]
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[6] https://yho.com/1wwmgg
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[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmNjE1dmJpBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0NjIyOTY0NTQ-
[11]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnOW5mOGo1BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDYyMjk2NDU0
[12]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlaWY3MDNnBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ2MjI5NjQ1NA--
[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11430. Re: PVC self standing frame for loops - any plans?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-05 18:03:04 UTC
From: rbrucecarter@...
Topic: 11412 Message: 11430

I don't recommend PVC pipe. Several reasons. (1) It is heavy - a large loop gets really heavy really fast. (2) PVC pipe is comparatively weak. Even six foot sections begin to sag with time. While it won't affect loop geometry that much, it is enough to let windings (external or internal) sag and lose their positioning. (3) if you use outdoors, PVC is really good at building up a static charge. Not something you want discharging / sparking into sensitive front ends!

11431. Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-06 18:24:42 UTC
From: Raoul Meunier
Topic: 11431 Message: 11431

Hello all,

I plan to build an HF magnetic loop for 30-10 mt and I wonder whether Heliax cable could be used instead of copper tubing. I have not found articles on this.
Thanks in advance,

73 de Raoul, CE3RY

11432. Re: Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-09 09:00:49 UTC
From: derf.mockford@...
Topic: 11431 Message: 11432

Large Heliax is ideal for making a 1 turn mag loop.
Good luck
73 Derf

11433. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-09 12:45:52 UTC
From: Chris Trask
Topic: 11431 Message: 11433

Others have used Heliax in the past to make shielded loops. Seems to work okay, and the larger outer diameter will give you less bulk resistance losses, thereby increasing the Q and the efficiency.

>
>I plan to build an HF magnetic loop for 30-10 mt and I wonder whether
>Heliax cable could be used instead of copper tubing. I have not found
>articles on this.
>Thanks in advance,
>
>
>73 de Raoul, CE3RY

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11434. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-09 14:53:23 UTC
From: James R. La Frieda
Topic: 11431 Message: 11434

Raoul,

FYI: Leigh Turner, VK5KLT, recently reported on two of the MLA's that
his good friend, Steve Adler, VK5SFA, in Adelaide, AU constructed using
1 17/64 inch Heliax.

Look at the conversations posted by VK5KLT as well as the QRZ.com
website of VK5SFA - who has a posted website , viz,:

http://members.iinet.net.au/~sadler@.../tmla.html

which contains a wealth of info and photos of the two-turn MLA's that
VK5SFA recently made - using heliax- which are working extremely well
on 160/80 and

40 meters.

73, Jim (N6MV)

On 5/9/2016 5:45 AM, Chris Trask christrask@... [loopantennas]
wrote:
>
> Others have used Heliax in the past to make shielded loops. Seems to
> work okay, and the larger outer diameter will give you less bulk
> resistance losses, thereby increasing the Q and the efficiency.
>
> >
> >I plan to build an HF magnetic loop for 30-10 mt and I wonder whether
> >Heliax cable could be used instead of copper tubing. I have not found
> >articles on this.
> >Thanks in advance,
> >
> >
> >73 de Raoul, CE3RY
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>

11435. Re: [loopantennas] Re: Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 03:10:43 UTC
From: Raoul Meunier
Topic: 11431 Message: 11435

Great! Thanks for your comment, Derf.

73 de Raoul, CE3RY

2016-05-09 6:00 GMT-03:00 derf.mockford@... [loopantennas] <
loopantennas@yahoogroups.com>:

>
>
> Large Heliax is ideal for making a 1 turn mag loop.
> Good luck
> 73 Derf
>
>

11436. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 03:12:09 UTC
From: Raoul Meunier
Topic: 11431 Message: 11436

Many thanks for the information, Chris. Appreciate it.

73 de Raoul, CE3RY

2016-05-09 9:45 GMT-03:00 Chris Trask christrask@...
[loopantennas] <loopantennas@yahoogroups.com>:

>
>
> Others have used Heliax in the past to make shielded loops. Seems to work
> okay, and the larger outer diameter will give you less bulk resistance
> losses, thereby increasing the Q and the efficiency.
>
> >
> >I plan to build an HF magnetic loop for 30-10 mt and I wonder whether
> >Heliax cable could be used instead of copper tubing. I have not found
> >articles on this.
> >Thanks in advance,
> >
> >
> >73 de Raoul, CE3RY
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>

11437. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 03:14:06 UTC
From: Raoul Meunier
Topic: 11431 Message: 11437

Jim,

Thanks for the link. There is an amazing amount of good information in
there!

73 de Raoul, CE3RY

2016-05-09 11:53 GMT-03:00 James R. La Frieda <lafrieda@...>:

> Raoul,
>
> FYI: Leigh Turner, VK5KLT, recently reported on two of the MLA's that his
> good friend, Steve Adler, VK5SFA, in Adelaide, AU constructed using 1 17/64
> inch Heliax.
>
> Look at the conversations posted by VK5KLT as well as the QRZ.com website
> of VK5SFA - who has a posted website , viz,:
>
>
> http://members.iinet.net.au/~sadler@.../tmla.html
>
> which contains a wealth of info and photos of the two-turn MLA's that
> VK5SFA recently made - using heliax- which are working extremely well on
> 160/80 and
>
> 40 meters.
>
> 73, Jim (N6MV)
>

>
> On 5/9/2016 5:45 AM, Chris Trask christrask@... [loopantennas]
> wrote:
>
>
>
> Others have used Heliax in the past to make shielded loops. Seems to work
> okay, and the larger outer diameter will give you less bulk resistance
> losses, thereby increasing the Q and the efficiency.
>
> >
> >I plan to build an HF magnetic loop for 30-10 mt and I wonder whether

> >Heliax cable could be used instead of copper tubing. I have not found
> >articles on this.
> >Thanks in advance,

> >
> >
> >73 de Raoul, CE3RY
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>
>
>

11438. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 03:20:59 UTC
From: Raoul Meunier
Topic: 11431 Message: 11438

Thanks for the clarification, Steve. What I have here is Heliax coaxial cable...

73 de Raoul, CE3RY

2016-05-09 18:38 GMT-03:00 Steve Adler <steve_adler@...>:

> Hello Everyone,
>
> The Heliax is elliptical waveguide, not Heliax coaxial cable just for
> clarity. There is a significant weight difference between the two.
>
> Cheers, Steve
>
> On 10 May 2016, at 12:23 AM, James R. La Frieda <lafrieda@...>
> wrote:
>
> Raoul,
>
> FYI: Leigh Turner, VK5KLT, recently reported on two of the MLA's that his
> good friend, Steve Adler, VK5SFA, in Adelaide, AU constructed using 1 17/64
> inch Heliax.
>
> Look at the conversations posted by VK5KLT as well as the QRZ.com
> <http://qrz.com> website of VK5SFA - who has a posted website , viz,:
>
>
> http://members.iinet.net.au/~sadler@....au/tmla.html
>
> which contains a wealth of info and photos of the two-turn MLA's that
> VK5SFA recently made - using heliax- which are working extremely well on
> 160/80 and
>
> 40 meters.
>
> 73, Jim (N6MV)
>
>
> On 5/9/2016 5:45 AM, Chris Trask christrask@... [loopantennas]
> wrote:
>
>
>
> Others have used Heliax in the past to make shielded loops. Seems to work
> okay, and the larger outer diameter will give you less bulk resistance
> losses, thereby increasing the Q and the efficiency.

>
> >
> >I plan to build an HF magnetic loop for 30-10 mt and I wonder whether
> >Heliax cable could be used instead of copper tubing. I have not found
> >articles on this.

> >Thanks in advance,
> >
> >
> >73 de Raoul, CE3RY
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>
>
>

11439. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 08:03:14 UTC
From: leo1949uk@...
Topic: 11431 Message: 11439

James... URL does not work, it seems to be compressed !!

Thanks..

Lee...G6ZSG.

11440. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 08:09:36 UTC
From: Tony Magon
Topic: 11431 Message: 11440

Try this

http://members.iinet.net.au/~sadler@.../tmla.html

73

Tony VK2IC

On Tue, May 10, 2016 at 6:03 PM, leo1949uk@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> James... URL does not work, it seems to be compressed !!
>
> Thanks..
>
> Lee...G6ZSG.
>
>

11441. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-11 07:58:31 UTC
From: leo1949uk@...
Topic: 11431 Message: 11441

Thanks but no, I have error 404 !!

URL as I received it ... http://members.iinet.net.au/~sadler@.../tmla.html
http://members.iinet.net.au/%7Esadler@.../tmla.html .. is that correct ??

Regards.

Lee...G6ZSG.

11442. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-11 08:20:18 UTC
From: Tony Magon
Topic: 11431 Message: 11442

The previous url works. Here it is again

http://members.iinet.net.au/%7Esadler@.../tmla.html

73

Tony VK2IC

11443. The underestimated transmitting loop link might be broken

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-11 09:38:17 UTC
From: Steve Adler
Topic: 11443 Message: 11443

Please try this link if you are having trouble. Enjoy the article and the modelling links on my home page.

http://members.iinet.net.au/~sadler@netspace.net.au

73 Steve VK5SFA

11444. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 11:04:48 UTC
From: Steve Adler
Topic: 11431 Message: 11444

Try this url:

http://members.iinet.net.au/~sadler@...

It will give you the choice of the TMLA and modelling information as well.

73 Steve VK5SFA

11445. Re: [loopantennas] Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 05:17:02 UTC
From: Steve Adler
Topic: 11431 Message: 11445

>> Hello Everyone,
>>
>> The Heliax is elliptical waveguide, not Heliax coaxial cable just for clarity. There is a significant weight difference between the two.
>>
>> Cheers, Steve VK5SFA

11446. Heliax cable for a magnetic loop?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-10 11:10:50 UTC
From: Steve Adler
Topic: 11431 Message: 11446

Try this url:

http://members.iinet.net.au/~sadler@...

It will give you the choice of the TMLA and modelling information as well.

73 Steve VK5SFA

11450. Re: [loopantennas] Digest Number 2715

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-14 04:53:17 UTC
From: alienrelics@...
Topic: 11449 Message: 11450

Please do not reply to the digest; please do not send "test" messages to the list.

You just reposted the entire digest just to say "testing".

Steve Greenfield AE7HD
moderator loopantennas

---In loopantennas@yahoogroups.com, <kb4uxc@yahoo.com> wrote :

Testing

11451. Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-15 12:05:06 UTC
From: ktjensen1994@...
Topic: 11451 Message: 11451

So am looking for advice from others who live in apartments.

Have a nasty noise problem of S7 to S9 constant. Can not use any external antennas (no dipoles, no long wires). Have set up a temporary inside antenna in my third floor apartment, with endfed unun 9:1 and a long wire. It gets my reception of JT65 and I can decode.

The problem is I can do nothing else with my radio. Cant to CW, as I cant hear much anything else. Cant to Voice SSB. None of the bands work on anything else. Sure I can hear them slightly in the hash of noise, but can not interpret what they are saying at all.

Would a magnetic loop work as a solution? Am thinking of the MFJ-935B to try out and experiment with. Before I spend the money, I want to hear if others used magnetic loops as an apartment solution.

N1KTJ
Kevin

11452. mfj936b manual - free for postage

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-15 15:28:25 UTC
From: ktjensen1994@...
Topic: 11452 Message: 11452

If anyone needs an MFJ936B manual - let me know and send me postage. Will send it out. I printed it a couple months ago, but then had to send the loop back.

N1KTJ
Kevin

11453. Re: [loopantennas] Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-15 16:50:52 UTC
From: Raoul Meunier
Topic: 11451 Message: 11453

Kevin,
I don't know about the loop but, have you thought trying the noise cancel unit that MFJ makes, MFJ-1026?
I have had good results with it.
Good luck!
73 de Raoul, CE3RY

> El 15-05-2016, a las 09:05, ktjensen1994@att.net [loopantennas] <loopantennas@yahoogroups.com> escribió:
>
> So am looking for advice from others who live in apartments.
>
>
>
> Have a nasty noise problem of S7 to S9 constant. Can not use any external antennas (no dipoles, no long wires). Have set up a temporary inside antenna in my third floor apartment, with endfed unun 9:1 and a long wire. It gets my reception of JT65 and I can decode.
>
>
>
> The problem is I can do nothing else with my radio. Cant to CW, as I cant hear much anything else. Cant to Voice SSB. None of the bands work on anything else. Sure I can hear them slightly in the hash of noise, but can not interpret what they are saying at all.
>
>
>
> Would a magnetic loop work as a solution? Am thinking of the MFJ-935B to try out and experiment with. Before I spend the money, I want to hear if others used magnetic loops as an apartment solution.
>
>
>
> N1KTJ
>
> Kevin
>
>
>
>
>
>

11454. Re: Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-15 17:56:58 UTC
From: winston376@...
Topic: 11451 Message: 11454

If you've got a balcony, get a loaded or tuned vertical and mount it somewhere on the balcony as far away from the walls. Otherwise, a tuned loop looks like a next step. Been there.....it was challenging to get even mediocre results pre-PC, 30+ years ago, and even worse today because of all the digital stuff. A.

11455. Re: [loopantennas] Re: Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-15 18:14:03 UTC
From: Paul Stoetzer
Topic: 11451 Message: 11455

I've worked 161 DXCCs from the south facing balcony of my apartment in Washington, DC with magnetic loops: first an AlexLoop Walkham (106 DXCCs with that) and then an MFJ-1786 when I wanted to start running 100 watts. I had tried throwing wires over the balcony and such, but the magnetic loop definitely results in a better SNR on received signals.

Some great contacts include a 30m RTTY QSO with VK0EK.

The downside of magnetic loops, of course, is transmit efficiency. A really nice solution might be to use separate receive and transmit antennas.

73,

Paul, N8HM

On Sun, May 15, 2016 at 1:56 PM, winston376@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> If you've got a balcony, get a loaded or tuned vertical and mount it
> somewhere on the balcony as far away from the walls. Otherwise, a tuned
> loop looks like a next step. Been there.....it was challenging to get even
> mediocre results pre-PC, 30+ years ago, and even worse today because of all
> the digital stuff.
> A.
>
>
>

11456. Re: Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-16 01:06:08 UTC
From: ktjensen1994@...
Topic: 11451 Message: 11456

Raoul CE3RY - yes I have thought about a noise canceling device like you mentioned. Its the same price as a magnetic loop, at around $200. So the choice is do I mess with noise canceling or do I mess with Magnetic loops. Eventually I am sure I will be into both.

11457. Re: [loopantennas] Re: Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-16 14:46:52 UTC
From: Andy
Topic: 11451 Message: 11457

Noise canceling works best when you have a single source of noise. If the noise is broadband power-line stuff (coming from every electrical thing connected to the power grid, and radiated by all power wiring), then your chances of success with that are marginal.

The other way to look at using one of the noise canceling units, is you are making a directional antenna array. By tweaking the unit's adjustment knobs, you direct a "null" in your antenna's pattern, in one particular direction, which is the interfering signal. Which is fine as long as all the noise is coming from that one direction. But if you have multiple noise sources, you are sunk using that method.

Regards,
Andy

11458. H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-16 19:37:20 UTC
From: gccradioscience@...
Topic: 11458 Message: 11458

I need to know what is a H-Field or B-Field antenna is. How many turns, and what size is a H-Field or B-Field antenna is. How do I build one? It's for a VLF radio receiver project that I am going to be constructing soon to listen to VLF sferics and whistlers and other VLF natural radio phenomena from 300 Hz to 10 kHz.

Adam Ebel
Virginia Beach, Virginia

11460. Re: [loopantennas] H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-16 23:29:58 UTC
From: Andy
Topic: 11458 Message: 11460

I do not recall having seen something called an H-field or B-field antenna, but those terms refer to the magnetic field, as opposed to the electric field (the two components of electromagnetic radiation).

So I'm guessing that it means any electrically small loop antenna that responds mainly to the RF's magnetic field. I have seen many VLF loop antenna construction articles where the wire is wound around a ferrite rod to boost sensitivity. That would be one example. A few turns of wire wound around a wooden frame, or wound around a doorway, would be two more examples. Some LF/VLF/ELF antennas are short amplified whips, and that is not what this would be; they respond to the electric field.

Andy

11461. Re: [loopantennas] H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 01:46:27 UTC
From: Will Kimber
Topic: 11458 Message: 11461

Many years ago I had a signal tracer that was basically just a valve (tube) audio amp with high impedance input. It used to receive whistlers quite well with just a few inches of wire.

Cheers,

Will

On 05/17/2016 07:37 AM, gccradioscience@... [loopantennas] wrote:
>
> I need to know what is a H-Field or B-Field antenna is. How many
> turns, and what size is a H-Field or B-Field antenna is. How do I
> build one? It's for a VLF radio receiver project that I am going to
> be constructing soon to listen to VLF sferics and whistlers and other
> VLF natural radio phenomena from 300 Hz to 10 kHz.
>
>
> Adam Ebel
> Virginia Beach, Virginia
>
>
>
>

11462. Re: [loopantennas] Re: Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 05:11:35 UTC
From: Maxwell Mclellan
Topic: 11451 Message: 11462

G,Day all. I have had some good results in a suburban environment receiving BCB signals using two identical magnetic loops and a Quantum Phaser. The loops are mounted about a metre apart and parallel to each other with the phaser and radio in the middle.
Tune the loops individually, rotate the construction for maximum signal. Now rotate one loop so that you just lose the required signal but keep its noise.
Now both loops are immersed in the local noise and one is also receiving the distant noise arriving at both loops. The phaser when adjusted properly will yield up the required audio with both the distant and local noise removed . Regards vk2tti.

Sent from my iPad

> On 17 May 2016, at 12:46 am, "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Noise canceling works best when you have a single source of noise. If the noise is broadband power-line stuff (coming from every electrical thing connected to the power grid, and radiated by all power wiring), then your chances of success with that are marginal.
>
> The other way to look at using one of the noise canceling units, is you are making a directional antenna array. By tweaking the unit's adjustment knobs, you direct a "null" in your antenna's pattern, in one particular direction, which is the interfering signal. Which is fine as long as all the noise is coming from that one direction. But if you have multiple noise sources, you are sunk using that method.
>
> Regards,
> Andy
>
>
>

11463. 'Helping Hams' pedestrian portable loop conversion

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 10:33:32 UTC
From: sjdeines@...
Topic: 11463 Message: 11463

'Helping Hams' are videos to do just that, help hams. This video, which released yesterday from parts purchased last week, presents an inexpensive conversion of an Alpha Loop to pedestrian portable. This can be done to any loop though!
https://youtu.be/23VB5orSE7c https://youtu.be/23VB5orSE7c

73,
Steve

N0TES

11464. Re: H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 17:38:06 UTC
From: lowalacrity@...
Topic: 11458 Message: 11464

Adam, Way back in the70's and 80's, i used a 3 ft air wound loop with 70 or 80 turns of # 24 enameled copper. i heard lots of spherics but only heard whistlers once,(they're elusive anyway). Large ferrite loops ala Stormwise performed similarly. there are examples of H or B field antennas. You just connect them to a high gain audio amp. I used an old Archer mini amp from RS and got satisfactory performance. Then, in the early 90's, Conversion Research came out with their WR-3. It was a small E-field receiver that outperformed the magnetic field receivers and only used a small whip. They use a high impedance FET input that drives an LM386 8 pin IC amp on a chip, enough to drive a pair of earbuds quite well. Still use it to this day when camping. I've heard may a whistler since going "E". I also have an "Earth Monitor" from Kiwa. It uses a remote pre-amp and control box that employs variable band-pass tuning. If you want to build one in kit form, the INSPIRE project sells the VLF-3, probably your best bet, ($120). Just remember, you need to be a 1/4 to a mile away from power lines depending on how high the voltage is. Hope this helps. John

11465. Re: [loopantennas] H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 04:17:03 UTC
From: gccradioscience@...
Topic: 11458 Message: 11465

I also forgot to ask what size awg magnet or hookup wire would you recommend for a H or B-Field loop antenna. I know that anything like 30 awg which I used to use to build a box frame antenna that I currently am using with my 1 MHz crystal oscillator VLF converter connected to the KA-1103 or Grundig G5. I wish that my Radio Science Observing Volume 1 and 2 CD-ROM would worked with my Windows 10 32 bit HP laptop since there were various programs for constructing loop antennas. I just don't know how to get 16 Bit software to work. I greatly appreciate the help and support from this group, and glad post more often.

Adam Ebel
Virginia Beach, VA

11466. Re: [loopantennas] H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 04:01:58 UTC
From: gccradioscience@...
Topic: 11458 Message: 11466

How many turns would you recommend for a well performing H-Field , B-Field loop antenna, and what size is best for VLF natural radio?

It's for my first floor apartment in the living room VLF natural radio receiver. Possibly will place the loop on the ground on the carpet.

Adam Ebel
Virginia Beach, VA

11467. Re: [loopantennas] H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 19:15:52 UTC
From: Steve Ratzlaff
Topic: 11458 Message: 11467

As someone else already mentioned, the e-field active whip Natural Radio will be much more sensitive than any small loop Natural Radio. And one needs to get as far as possible from all sources of AC power. You won't hear anything but the very strong 60 cycle hum if you're hoping to listen inside your apartment! At least find a park or playground without any AC power within several hundred feet, you might be able to hear some stronger sferics around sunset or sunrise. Otherwise you'll still just pick up the very strong AC hum which will overpower any weak signals.

Good luck!

Steve AA7U (who used to do Natural Radio listening when I lived where I could drive to a spot several miles from a power line)

On 5/16/2016 9:01 PM, gccradioscience@... [loopantennas] wrote:
>
> How many turns would you recommend for a well performing H-Field ,
> B-Field loop antenna, and what size is best for VLF natural radio?
>
>
> It's for my first floor apartment in the living room VLF natural radio
> receiver. Possibly will place the loop on the ground on the carpet.
>
> Adam Ebel
> Virginia Beach, VA
>
>
>

11468. Re: [loopantennas] H or B Field Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 20:59:12 UTC
From: lowalacrity@...
Topic: 11458 Message: 11468

Adam, Steve is correct. E-field receivers produce much stronger signals.You need a strong signal to have any chance of decent reception at home. Early on, I used my Kiwa with the pre-amp/whip high over head my house and using active high pass filtering to blunt the overpowering 60 cycle hum. Somewhat effective, heard some whistlers early in the morning. Then i discovered Wolfgang, DL4YHF who wrote software for a program called Spectrum Lab. Has a waterfall display for audio analysis, DSP for better filtering and logging capability. Easy to use and free! Check it out. Great for VLF work in general. John

11469. Re: Natural Radio simple e-field receivers

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-17 21:54:47 UTC
From: Steve Ratzlaff
Topic: 11458 Message: 11469

Adam:

Several easy-to-build Natural Radio receivers are listed at this site:

http://www.techlib.com/electronics/VLFwhistle.htm

They are all e-field receivers; the opamps are readily available and inexpensive on eBay, from US sellers.

Good luck!

Steve

11470. Re: Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-19 13:17:41 UTC
From: ktjensen1994@...
Topic: 11451 Message: 11470

Maxwell - that's bordering on genius level advice. Two magnetic loops, because any single loop will block most of the noise, given directional and null characteristics. But two, and a noise canceling circuit would lock you into canceling out the noise source regardless of the kind of noise.

Maybe an MFJ-1025 or MFJ-1026 for noise canceling, plus start with a MFJ-925B MLA. Likely I would get a single MLA first and see if a simple vertical antenna could work to tune out the noise, and then increase to dual magnetic loops, if I need even further correction.

getting kind of expensive at this level in costs, but am sure no worse than the typical $1000 many drop on antenna systems.

N1KTJ
Kevin

11471. Re: [loopantennas] Re: Magnetic Antenna - magic bullet for Apartment?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-21 04:09:57 UTC
From: vk2tti@...
Topic: 11451 Message: 11471

G'day Kevin, It gets better. I was listening to Queensland BCB station one night when the thought ocurred to me that the Phaser instructions suggested that you could cancel not only the noise but the signal of the target station as well.
I aimed both loops at the station, threw the appropriate switch and sat back to hear the "Sounds of Silence".
Instead I was presented with the audio of two weaker stations under the Queensland station, one with female announcer and the other a male.
I sat back gobsmacked. It was the end of a long day and did not try to identify the stations.
If we look at the reception qualitys of a loop the reception lines of the loops cross the target area and diverge on the other side, also the loops lines continue "behind'" us and diverge there.
The signals for the weaker stations must have been rideing on one of those lines on the same frequency and only became apparent once the stronger stations influence was extinguished.
Regards again Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
19 May 2016 06:17:41 -0700
Subject:
[loopantennas] Re: Magnetic Antenna - magic bullet for Apartment?

Maxwell - that's bordering on genius level advice. Two magnetic loops, because any single loop will block most of the noise, given directional and null characteristics. But two, and a noise canceling circuit would lock you into canceling out the noise source regardless of the kind of noise.

Maybe an MFJ-1025 or MFJ-1026 for noise canceling, plus start with a MFJ-925B MLA. Likely I would get a single MLA first and see if a simple vertical antenna could work to tune out the noise, and then increase to dual magnetic loops, if I need even further correction.

getting kind of expensive at this level in costs, but am sure no worse than the typical $1000 many drop on antenna systems.

N1KTJ

Kevin

Email sent using Optus Webmail

Links:
---
[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11470;_ylc=X3oDMTJyb3ZydWk0BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTQ3MARzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0NjM2NjM4NjI-?act=reply&messageNum=11470
[2]
mailto:ktjensen1994@...?subject=Re%3A%20Magnetic%20Antenna%20-%20magic%20bullet%20for%20Apartment%3F
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20Magnetic%20Antenna%20-%20magic%20bullet%20for%20Apartment%3F
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmZ2drYWZmBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0NjM2NjM4NjI-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11451;_ylc=X3oDMTM3MWpnMWJlBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTQ3MARzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0NjM2NjM4NjIEdHBjSWQDMTE0NTE-
[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmdmNiYzd1BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0NjM2NjM4NjI-
[11]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJndThzcWRuBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDYzNjYzODYy
[12]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlM3Z1bGRsBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ2MzY2Mzg2Mg--
[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11472. Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 07:38:09 UTC
From: f8dql@...
Topic: 11472 Message: 11472

Hello,
I have built the Simple Varactor-Tuned Loop Antenna by N7ZWY but it does not work. I just have more noise when supplied with 1 to 4 volts.
I don't know where to look at, and I just have a SDR to test.
Any help would be really appreciated.
73

11473. Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 10:52:59 UTC
From: Tim Hills
Topic: 11472 Message: 11473

Which varactor(s) are you using?

I bought a bulk lot of 300 MVAM109s and found about 10 of them that
produced noise through high reverse current leakage.

Just a thought.

Tim Hills
Sioux Falls, SD

On 5/26/2016 2:38 AM, f8dql@... [loopantennas] wrote:
>
> Hello,
>
> I have built the Simple Varactor-Tuned Loop Antenna by N7ZWY but it
> does not work. I just have more noise when supplied with 1 to 4 volts.
>
> I don't know where to look at, and I just have a SDR to test.
>
> Any help would be really appreciated.
>
> 73
>
>
> ---
>

11474. Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 11:32:13 UTC
From: f8dql@...
Topic: 11472 Message: 11474

Hi Jim, I have two MVAM109. They look good with a DMM.
How to ensure they are not generating noise?

11475. Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 13:00:34 UTC
From: Chris Trask
Topic: 11472 Message: 11475

Defective varactors could be a serious problem. I have contemplated designing a similar loop using a dual 365pF variable capacitor, using the coupling technique that I used for the transmitting loop.

Many of the MVAM series varactors out there are from China and are of quwestionable quality. If you suspect them, you may want to use the 1SV149 varactor, which can be bought cheaply on evilBay:

www.ebay.com/itm/201056378032?_trksid=p2055119.m1438.l2649&ssPageName=STRK%3AMEBIDX%3AIT

>
>Hi Jim, I have two MVAM109. They look good with a DMM.
> How to ensure they are not generating noise?
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11476. Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 15:42:27 UTC
From: Tim Hills
Topic: 11472 Message: 11476

If you don't have a 'scope or spectrum analyzer the easiest way is to attach a short wire to the Cathode of the Varactor and monitor it with a portable MW radio tuned to a "quiet" Freq. while you vary the Voltage. Or measure the Current under reverse Voltage. If it's more than a few uA then it's a bad varactor.

I see Chris mentioned the 1SV149 which I have also used for tuning loops, etc. Probably your best bet is to replace them if you can.

The MVAM 109s I got were likely Chinese made or factory "dropouts". Of the 300 between noise, funky V/C curves, narrow range, etc. the yield was about 120 usable. Considering what I paid for the lot I still got a heck of a deal. If you don't consider my time put into them...

Tim Hills
Sioux Falls, SD, USA

On 5/26/2016 6:32 AM, f8dql@... [loopantennas] wrote:
>
> Hi Jim,
>
> I have two MVAM109. They look good with a DMM.
> How to ensure they are not generating noise?
>

11477. Re: Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 17:04:33 UTC
From: f8dql@...
Topic: 11472 Message: 11477

Hi, I do have a scope.
I'll check the varactors (which are not Chinese, I hope so) and will get back to you.
73

11478. Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 17:38:00 UTC
From: Schick, David
Topic: 11472 Message: 11478

Mr. Trask,

Have you considered the Peregrine variable capacitors:
http://www.psemi.com/products/digitally-tunable-capacitors-dtc

Last I looked the Q was pretty poor.

Dave Schick, w9ofa

On Thu, May 26, 2016 at 7:00 AM, Chris Trask christrask@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

> Defective varactors could be a serious problem. I have contemplated
> designing a similar loop using a dual 365pF variable capacitor, using the
> coupling technique that I used for the transmitting loop.
>
> Many of the MVAM series varactors out there are from China and are of
> quwestionable quality. If you suspect them, you may want to use the 1SV149
> varactor, which can be bought cheaply on evilBay:
>
>
> www.ebay.com/itm/201056378032?_trksid=p2055119.m1438.l2649&ssPageName=STRK%3AMEBIDX%3AIT
>
> >
> >Hi Jim, I have two MVAM109. They look good with a DMM.
> > How to ensure they are not generating noise?
> >
>
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>
> ------------------------------------
> Posted by: Chris Trask <christrask@...>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the
> Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>

> You can now view images at higher resolution in Photos. Upload JPG and GIF
> into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!
> ---
>
> Yahoo Groups Links
>
>
>
>

11479. Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-26 20:42:34 UTC
From: Chris Trask
Topic: 11472 Message: 11479

Nothing beats the Q of an air-variable capacitor.

>
>Mr. Trask,
>
>Have you considered the Peregrine variable capacitors:
>http://www.psemi.com/products/digitally-tunable-capacitors-dtc
>
>Last I looked the Q was pretty poor.
>

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

11480. RE: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-27 02:37:10 UTC
From: Leigh Turner
Topic: 11472 Message: 11480

Hi Chris,

I concur about the attainable Q of air-variables versus varicap varactor diodes.

However Teledyne Crystalonics still manufacture a range of decent varactors suitable for tuning HF loops. The IN5714, IN5717 family of high-capacitance varicaps (up to 500 to 1000 pF) sport a Q of circa 200 to 300 or so. Crystalonics produce a large range of legacy and JAN semiconductors that have elsewhere long attained *unobtainium* status. They specialize in supporting the availability of parts for the defence/mil market which has very long lifecycles.

Their unique product line includes a very capable low-noise high dynamic range JFET, the CP-650 and a few other variants thereof. This family of unique JFET devices sport extraordinary transconductance / gm circa 0.15S to 0.25S / 150,000 to 250,000 micro-mhos and low noise figure with high drain current capability enabling amplifiers with exceptional dynamic range and intercept points, particularly when deployed in push-pull. They make excellent wideband antenna preamps with NF circa 2 dB in Norton style topologies.

These unique CP6XX devices are actually FET arrays comprising a multitude of 15 parallel devices in an integrated die single package.

https://www.crystalonics.com/

Leigh

VK5KLT

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Friday, 27 May 2016 6:13 AM
To: loopantennas@yahoogroups.com; loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Nothing beats the Q of an air-variable capacitor.

>
>Mr. Trask,
>
>Have you considered the Peregrine variable capacitors:
> http://www.psemi.com/products/digitally-tunable-capacitors-dtc
>
>Last I looked the Q was pretty poor.
>

Chris

When the going gets weird, the weird turn pro
- Hunter S. Thompson

11481. Re: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-27 03:39:23 UTC
From: Schick, David
Topic: 11472 Message: 11481

> Nothing beats the Q of an air-variable capacitor.

Indeed. I keep looking for specifications for MEMS variable capacitors and
I can't find any - they seem like expensive vaporware right now. They
might be usable for transmit at QRPp levels.

Dave

On Thu, May 26, 2016 at 2:42 PM, Chris Trask christrask@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

> Nothing beats the Q of an air-variable capacitor.
>
> >
> >Mr. Trask,
> >
> >Have you considered the Peregrine variable capacitors:
> >http://www.psemi.com/products/digitally-tunable-capacitors-dtc
> >
> >Last I looked the Q was pretty poor.
> >
>
>
> Chris
>
> When the going gets weird, the weird turn pro
> - Hunter S. Thompson
>
>
> ------------------------------------
> Posted by: Chris Trask <christrask@...>
> ------------------------------------
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the
> Links rather than uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF
> into Photos. Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!
> ------------------------------------

>
> Yahoo Groups Links
>
>
>
>

11482. RE: [loopantennas] Simple Varactor-Tuned Loop Antenna by N7ZWY

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-05-27 06:58:40 UTC
From: dx11
Topic: 11472 Message: 11482

Like in the AMRAD active antenna?

http://www.robkalmeijer.nl/techniek/electronica/radiotechniek/hambladen/qst/2001/09/page31/

Cor PA4Q

Their unique product line includes a very capable low-noise high dynamic range JFET, the CP-650 and a few other variants thereof. This family of unique JFET devices sport extraordinary transconductance / gm circa 0.15S to 0.25S / 150,000 to 250,000 micro-mhos and low noise figure with high drain current capability enabling amplifiers with exceptional dynamic range and intercept points, particularly when deployed in push-pull. They make excellent wideband antenna preamps with NF circa 2 dB in Norton style topologies.

11483. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-06-01 13:19:47 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11483

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11484. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-06-01 13:19:47 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11484

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11485. Ferrite Rod antenna shild

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-06-18 14:07:49 UTC
From: roberto.zinelli@...
Topic: 11485 Message: 11485

Hello, i have a question about the antenna shild, Why we need keep the shild distant about 100 mm from the rod antenna like this?
http://www.qsl.net/df3lp/projects/sid/ferrite_rod.jpg
http://www.qsl.net/df3lp/projects/sid/ferrite_rod.jpg

The shild is open and not make a short spiral.

73 IW4ENS
Roberto

11486. MFJ-9232

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-06-27 01:24:47 UTC
From: Raoul Meunier
Topic: 11486 Message: 11486

Greetings!

I purchased a MFJ-9232 a couple weeks ago and I tried it today.

I made a loop for 24 MHz as described in the manual, and tried it using 5 watts, to be conservative. It tuned fine, a little “touchy” and I was able to go down to 1.3:1 SWR. Same on 28, and 21 MHz. Great!

My problem started when I increased the power… At 10 watts, it arced, showing a sudden increase in SWR.

After that, the “Tuning” capacitor no longer turns 180° but only about 45°… I opened the unit and found the capacitor still warm, and the dielectric material that separates the plates was stuck to the rotor.

May I ask you what would the best way to contact MFJ be to ask them about the warranty this thing is supposed to have… I have no experience in this field.

Your comments will be very much appreciated!

I bought this unit having in mind I could use it in the 15-20 Watt range… No luck.

73 de Raoul, CE3RY

11487. Re: [loopantennas] MFJ-9232

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-06-27 09:41:38 UTC
From: James R. La Frieda
Topic: 11486 Message: 11487

Raoul,

See the following URL : http://www.mfjenterprises.com/warranty.php for
MFJ Warranty Coverage.

As long as you didn't apply more than 25 watts to your MFJ -9232 mini
loop tuner, MFJ should be willing to repair it- under their 12 month
warranty.

73, Jim (N6MV)

On 6/26/2016 6:24 PM, Raoul Meunier rmeunier@... [loopantennas] wrote:
>
> Greetings!
>
> I purchased a MFJ-9232 a couple weeks ago and I tried it today.
>
> I made a loop for 24 MHz as described in the manual, and tried it
> using 5 watts, to be conservative. It tuned fine, a little “touchy”
> and I was able to go down to 1.3:1 SWR. Same on 28, and 21 MHz. Great!
>
> My problem started when I increased the power… At 10 watts, it arced,
> showing a sudden increase in SWR.
>
> After that, the “Tuning” capacitor no longer turns 180° but only about
> 45°… I opened the unit and found the capacitor still warm, and the
> dielectric material that separates the plates was stuck to the rotor.
>
> May I ask you what would the best way to contact MFJ be to ask them
> about the warranty this thing is supposed to have… I have no
> experience in this field.
>
> Your comments will be very much appreciated!
>
> I bought this unit having in mind I could use it in the 15-20 Watt
> range… No luck.
>
> 73 de Raoul, CE3RY
>
>

11488. Re: [loopantennas] MFJ-9232

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-06-27 20:13:53 UTC
From: Raoul Meunier
Topic: 11486 Message: 11488

Jim,

Many thanks for your response. Now is the time to find out about MFJ's customer policy... and practice.

Thanks again!

73 de Raoul, CE3RY

2016-06-27 5:41 GMT-04:00 'James R. La Frieda' lafrieda@... [loopantennas] <loopantennas@yahoogroups.com>:

>
>
> Raoul,
>
> See the following URL : http://www.mfjenterprises.com/warranty.php for
> MFJ Warranty Coverage.
>
> As long as you didn't apply more than 25 watts to your MFJ -9232 mini loop
> tuner, MFJ should be willing to repair it- under their 12 month warranty.
>
> 73, Jim (N6MV)
>
> On 6/26/2016 6:24 PM, Raoul Meunier rmeunier@... [loopantennas]
> wrote:
>
>
>
> Greetings!
>
>
>
> I purchased a MFJ-9232 a couple weeks ago and I tried it today.
>
> I made a loop for 24 MHz as described in the manual, and tried it using 5
> watts, to be conservative. It tuned fine, a little “touchy” and I was able
> to go down to 1.3:1 SWR. Same on 28, and 21 MHz. Great!
>
> My problem started when I increased the power… At 10 watts, it arced,
> showing a sudden increase in SWR.
>
> After that, the “Tuning” capacitor no longer turns 180° but only about
> 45°… I opened the unit and found the capacitor still warm, and the
> dielectric material that separates the plates was stuck to the rotor.
>

>
>
> May I ask you what would the best way to contact MFJ be to ask them about
> the warranty this thing is supposed to have… I have no experience in this
> field.
>
> Your comments will be very much appreciated!
>
>
>
> I bought this unit having in mind I could use it in the 15-20 Watt range…
> No luck.
>
>
>
> 73 de Raoul, CE3RY
>
>
>
>

11489. Wellbrook FLG100 and ALA100 modules for sale, also Quantum V3 Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-01 03:34:36 UTC
From: daiche@...
Topic: 11489 Message: 11489

I have been upgrading to the newer 'LN' product and have 4 Wellbrook FLG100 modules and 2 Wellbrook ALA100 modules for sale at good prices. These don't come with the interface/voltage injector adapter and they are used, but in good shape. You can get Russian made voltage injectors for $18 each. I want $125 each for the Wellbrook modules, CONUS only. If you are interested, contact me at my email:
'daiche -at- yahoo -dot- com'. I can take PayPal payments and am ham operator N7NZH.

Since I have moved on to mostly SDR radio listening, I also have 2 Radio Plus Quantum V3 loops for sale and will include an extra 15" ferrite head with each. They come with 7.5" ferrite heads with variable gain. The larger 15" heads have no external antenna adaptors. I want $175 each for the Quantum loops with 2nd ferrite heads.

I will pay shipping on CONUS orders and would consider a further discount for multiple items. Thanks!

Dave Aichelman N7NZH Grants Pass, Oregon

11490. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-01 13:31:59 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11490

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11491. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-01 13:32:00 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11491

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11492. Re: Wellbrook FLG100 and ALA100 modules for sale, also Quantum V3 Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-02 20:34:32 UTC
From: daiche@...
Topic: 11489 Message: 11492

OK Guys,

The 2 ALA100's are gone but I still have 4 FLG100 modules and 2 Quantum V3 loops for sale with a 2nd 15" ferrite loop head included with the Quantum's. I'll offer a lower prices for the purchase of multiple items.

For those of you who don't know the FLG100's, they are typically used with a fixed or variable resistor on the other end of the loop to form a null in that direction, in other words, a unidirectional pattern. They can be used as bidirectional antennas as well, by leaving out the resistor, with a little loss of sensitivity. I have used Wellbrook products from Andy for many years and they are all good. I have been upgrading to the newer LN version of his products and have these modules available.

73's

Dave Aichelman N7NZH Grants Pass, Oregon

11493. Re: MFJ-9232

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-13 14:56:05 UTC
From: ktjensen1994@...
Topic: 11486 Message: 11493

you might even be able to get a swap out return, if it is in the first 30 days. But do not know how you prove you used only low power when the unit arced on you.

11494. 30M loop antenna - low cost as possible

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-13 14:13:36 UTC
From: ktjensen1994@...
Topic: 11494 Message: 11494

Does anyone have a suggestion for a loop antenna that is as low cost/ low power as possible? just need it to cover 30M band SSB digital section with low power. Something that can be hung on a wall inside an apartment. Maybe I am thinking this wrong, but wondering if that is possible.

11495. Re: [loopantennas] 30M loop antenna - low cost as possible

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-13 18:27:14 UTC
From: Richard (Rick) Karlquist
Topic: 11494 Message: 11495

You would be better off adapting a dipole to your apartment.
Bend the wires if necessary. Put a loading coil at the
feedpoint. Tap down on the loading coil to get an
impedance match. A moxon type dipole might make sense
with the ends vertically along a corner. You should be
able to get at least a total of 1/4 wavelength, maybe
3/8 wavelength this way.

Rick N6RK

On 7/13/2016 7:13 AM, ktjensen1994@... [loopantennas] wrote:
>
>
> Does anyone have a suggestion for a loop antenna that is as low cost/
> low power as possible? just need it to cover 30M band SSB digital
> section with low power. Something that can be hung on a wall inside an
> apartment. Maybe I am thinking this wrong, but wondering if that is
> possible.
>
>
>
>

11496. Re: [loopantennas] 30M loop antenna - low cost as possible

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-13 16:39:31 UTC
From: mbdittmar@...
Topic: 11494 Message: 11496

How about:

http://wa8lmf.net/ham/30m-magloop-ant.htm

73 Mark AB0CW

----- Original Message -----

From: "ktjensen1994@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Wednesday, July 13, 2016 8:13:36 AM
Subject: [loopantennas] 30M loop antenna - low cost as possible

Does anyone have a suggestion for a loop antenna that is as low cost/ low power as possible? just need it to cover 30M band SSB digital section with low power. Something that can be hung on a wall inside an apartment. Maybe I am thinking this wrong, but wondering if that is possible.

11497. Re: [loopantennas] Re: MFJ-9232

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-13 19:19:57 UTC
From: Raoul Meunier
Topic: 11486 Message: 11497

Thanks for your comment, KT (what's your name and call sign?).
The good news for me is that MFJ will send me a couple capacitors; they mentioned a possible faulty cap in the unit I bought. I will not lose the warranty even if I perform the change.
It's a very simple unit...
Anyway, even though my expectation was to use it with up to 25 watts, I will try it at 5 Watts... It's dissapointing but I knew I was running a risk when buying from MFJ.

Thanks again and 73,
Raoul, CE3RY

2016-07-13 10:56 GMT-04:00 ktjensen1994@att.net [loopantennas] <
loopantennas@yahoogroups.com>:

>
>
> you might even be able to get a swap out return, if it is in the first 30
> days. But do not know how you prove you used only low power when the unit
> arced on you.
>
>

11498. Upgrading ALA1530LN to ALA1530LNP

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-09 22:35:18 UTC
From: yoonh.choi@...
Topic: 11498 Message: 11498

According to the email reply I got from Wellbrook, the only difference between ALA1530LN and ALA1530LNP is the antenna interface that has 9dB gain. So I purchased the 9dB interface separately, to upgrade my ALA1530LN to the "Pro" version. I upgraded it for more gain on 7-15MHz because I found the ALA1530LN weaker for those bands. Now all bands got 9dB boost so MW or low HF is even stronger than before, but with higher noise floor as I'm using the loop indoor so the local noises are also boosted. The upgrade works for me anyways, and I can switch back to the passive interface to downgrade if needed.

Yoonho

11499. Re: MFJ-9232

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-13 20:01:33 UTC
From: ktjensen1994@...
Topic: 11486 Message: 11499

N1KTJ
Kevin

keep forgetting to post that on the yahoo groups, as my call sign is there.

11508. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-20 00:01:28 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11508

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Magnetic Loop to Poynting Vector Antenna.ppt
Uploaded by : pvbirke <nonlinear@...>
Description : Magnetic Loop Transformation to Poynting Vector Antenna
(shown to a Swedish audience in 2014)

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/Magnetic%20Loop%20to%20Poynting%20Vector%20Antenna.ppt

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

pvbirke <nonlinear@...>

11516. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-23 02:17:31 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11516

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Comparison of Loop Antennas for AM Broadcast Reception.pdf
Uploaded by : mcromwel <mcromwel@...>
Description : AM BC Band Loop Comparison Measurements

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/Comparison%20of%20Loop%20Antennas%20for%20AM%20Broadcast%20Reception.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

mcromwel <mcromwel@...>

11517. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-24 20:19:13 UTC
From: farmerik@...
Topic: 238 Message: 11517

Thanks! I enjoyed the tests described in that article. I have all those factory made loops.

The PK tuned Loops from Australia are mostly larger and area matters. Available amplified and unamplified, and for LW and SW as well as MW.

Like the author I find the CCrane amplified ferrite takes time to tune in just right, and is not significantly better.

It is hard to find big differences among tuned loops similar in size. They DO help all but the very best portable radios.

I have some Litz wire loops and they tune much more sharply, needing a gear reduction drive or some other way to tune very slowly.

Thanks again, a very interesting article. - FARMERIK

11518. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-25 18:07:50 UTC
From: Mark Cromwell
Topic: 238 Message: 11518

Thank you for the feedback. The main reason for posting this was that I had never seen any measurements comparing these passive loops. Just subjective impressions. I suspect there would be some minor variations if I did them again (since they all involve "tweaking"), but since the signal strength tracked the loop areas, I'm thinking what I have is useful for comparison. This also opens the possibility of others doing cheap and dirty measurements the same way if they have receivers that give some good objective readings.

I'm mostly just a lurker on this group and others, but I wanted to say that I appreciate the informational contributions I've been reading and the quality of the discussions.

11519. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-27 16:51:16 UTC
From: 3ym3ym@...
Topic: 238 Message: 11519

Hi Mark,
Thanks for your great contribution to the group.
One very important parameter of loop antennas is the null depth.
Did you have a chance to measure it?

73, Mike

11520. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-27 21:52:58 UTC
From: mcromwel@...
Topic: 238 Message: 11520

I did not, Mike, but I may go back and try to add that info. The fact is, it didn't occur to me because the density of available signals is pretty low up here in the boondocks during the daytime. In order to do a good job of that, I'll need to determine more precisely the broadcast direction, so it may be a few days before I get to this. Or I might just pick a couple of stations and do it quick and dirty. Good suggestion. Watch for a rev 2 of the article.

11521. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-29 12:12:38 UTC
From: farmerik@...
Topic: 238 Message: 11521

I really appreciate all the work you shared already.

Possibly if your radio has ETM, you can point the loop antenna in different directions midday and do station counts. You would still need to tune in each frequency though.

The GP-5/SSB radio is not expensive and has a DSP chip. It tunes the loop itself at each frequency so it is a nice test bed. The 1/8th inch antenna jack connects on all bands, LW MW as well as SW. So it will retune the radio to the external loop at every step while ETM scanning the MW band in seconds. With that maybe just run a test every 30 degrees or so of 180 since the patterns will be bi-directional.

Online some where I have seen a 'calculator' to give signal strengths for any location with bearings I think. Figuring that out is complicated not only by station power but by directional patterns and signal path conditions. Better to just test from your location is my opinion.

-FARMERIK

11522. Re: New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-07-31 01:03:32 UTC
From: Mark Cromwell
Topic: 238 Message: 11522

Thanks for the suggestions. Being unemployed in this "booming" economy has imposed some restrictions on my ability to obtain ANY new equipment, however inexpensive.

I did actually rerun the tests for a couple of the frequencies. Because I am limited to inductive coupling to the radio I used, the results revealed a melding of the internal ferrite bar antenna with the air loop nulls. I ran the test with just the internal radio antenna (as a control) and then with each of the antennas for two of the station frequencies. As it turned out, I didn't need to know the station directions. I just put the radio and the loops onto a turntable, tuned to the frequency and rotated the entire setup until I got maximum and minimum readings.

I will probably republish the article with the results, but the bottom line is that it's difficult to separate the external loop null depth information from the data. Watch for more.

11523. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-01 11:06:01 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11523

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11524. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-01 11:06:01 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11524

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11525. AOR LA-400 Loop Antennas at 1/10 the usual price!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-05 12:40:56 UTC
From: ataraxiaguy@...
Topic: 11525 Message: 11525

I saw these listings on ebay for used AOR LA-400 Loop Antennas for under $50, with no shipping charges. These cost new at about $400 to $500. Both sellers are in China and are new to ebay.

- Bruce (USA)

AOR LA-400 Indoor Loop Antenna LA-390 successor from JAPAN http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K

http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K

AOR LA-400 Indoor Loop Antenna LA-390 successor from... http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K US $47.55 Used in Consumer Electronics, TV, Video & Home Audio, TV...

View on www.ebay.com http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K
Preview by Yahoo

NEW AOR LA-400 Indoor Loop Antenna LA-390 successor from JAPAN http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8

http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8

NEW AOR LA-400 Indoor Loop Antenna LA-390 successor... http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8 US $46.33 Used in Consumer Electronics, TV, Video & Home Audio, TV...

View on www.ebay.com http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8
Preview by Yahoo

11526. RE: [loopantennas] AOR LA-400 Loop Antennas at 1/10 the usual price!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-07 02:13:06 UTC
From: Silverfox
Topic: 11525 Message: 11526

All sold. Sale ended yesterday.

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Friday, August 5, 2016 5:41 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] AOR LA-400 Loop Antennas at 1/10 the usual price!

I saw these listings on ebay for used AOR LA-400 Loop Antennas for under $50, with no shipping charges. These cost new at about $400 to $500. Both sellers are in China and are new to ebay.

- Bruce (USA)

AOR LA-400 Indoor Loop Antenna LA-390 successor from JAPAN <http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K>

<http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K> image

<http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K> AOR LA-400 Indoor Loop Antenna LA-390 successor from...

US $47.55 Used in Consumer Electronics, TV, Video & Home Audio, TV...

<http://www.ebay.com/itm/AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192141839?hash=item236f5bca0f:g:FKYAAOSwyLlXof4K> View on www.ebay.com

Preview by Yahoo

NEW AOR LA-400 Indoor Loop Antenna LA-390 successor from JAPAN <http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8>

<http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8> image

<http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8> NEW AOR LA-400 Indoor Loop Antenna LA-390 successor...

US $46.33 Used in Consumer Electronics, TV, Video & Home Audio, TV...

<http://www.ebay.com/itm/NEW-AOR-LA-400-Indoor-Loop-Antenna-LA-390-successor-from-JAPAN-/152192786823?hash=item236f65a187:g:HZIAAOSwtnpXore8> View on www.ebay.com

Preview by Yahoo

11527. Re: AOR LA-400 Loop Antennas at 1/10 the usual price!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-07 15:47:17 UTC
From: ktjensen1994@...
Topic: 11525 Message: 11527

maybe a mistake in the listing?

11528. Broadband loop antenna amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-08 15:25:54 UTC
From: makidoja@...
Topic: 11528 Message: 11528

Hi all

I want to build a broadband rx loop antenna to cover 15m to 80m, my thoughts are to have 2 loops about 20m in dia 90deg apart, feed these to a relay so the direction can be changed simply.

So what I'm looking for is a low noise preamp with enough gain to shove the signal about 300m along WF100 sat coax.

Does anyone have such a design please?

I have contacted Welbrook but there only solution was 2 x ALA100LN and remote power source, this makes it an expensive trial.

Thanks in advance for any ideas, designs or guidance

Jim M0CKE

11529. RE: [loopantennas] Broadband loop antenna amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-11 18:29:37 UTC
From: david
Topic: 11528 Message: 11529

Hi Jim,

I sat back for a while, in case there was someone with encouraging ideas for you. However, it seems there are none, so here goes with some thoughts:-

20m diameter for an amplified HF loop looks like a recipe for overload and intermod. Amplified loops are generally a fraction of a wavelength - are you sure this is the right solution?

A 300m feed is going to give you problems to solve. On top of the signal loss down the cable, there is the supply voltage loss going up the cable to your amp. No wonder Wellbrook suggested a remote power supply.

Sat coax isn't wonderful. Have you looked at the losses for that sort of length at 20 Meg? There is also a considerable potential for Common Mode interference. Better shielding would help, but you will probably find quite a few problems to solve.

Have you looked at Chavdar's amp? [LZ1AQ - he posts on this list]. He uses Cat5 cable, which has losses at the lengths and frequencies you seek too. But his documentation tells you how to make allowances for the supply volts loss. And his amp is cheaper than two ALA100's.
Consider putting the receiver at the antenna, and using a LAN to get the signal back to the shack.
Or, you could use something closer to home ;)

Sorry not to come up with the Magic Bullet.

Let us know what you try, and how you get on.

Best Wishes
David, GM8XBZ

-----Original Message-----
From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: 08 August 2016 16:26
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Broadband loop antenna amplifier

Hi all

I want to build a broadband rx loop antenna to cover 15m to 80m, my thoughts are to have 2 loops about 20m in dia 90deg apart, feed these to a relay so the direction can be changed simply.

So what I'm looking for is a low noise preamp with enough gain to shove the signal about 300m along WF100 sat coax.

Does anyone have such a design please?

I have contacted Welbrook but there only solution was 2 x ALA100LN and remote power source, this makes it an expensive trial.

Thanks in advance for any ideas, designs or guidance

Jim M0CKE

11530. RE: [loopantennas] Broadband loop antenna amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-11 19:44:58 UTC
From: Alan
Topic: 11528 Message: 11530
Attachments: 1 described; binary payloads are missing from this source WARC

The 20m diameter loop is very large, and will have resonances in the HF range. What is the point of such an oversize loop? I would suggest that if you have the space you qualify for short Beverages, running a wire from bamboo canes as a test would be cheap to do. Far end termination is not vital but very simple to do. A simple ring transformer is needed to bring down the impedance to receiver level.

For HF use most active loops use a small diameter loop run into a current amplifier to get a flat frequency response, the output of a small loop increases with frequency but so does the inductance so the combination is non-selective. However when the distance around the loop approaches quarter wave the simple model breaks down. A 1m diameter loop is 3.14m around so that at 28MHz it has departed from the simple model and needs other means to equalise. So a 20m diameter loop with over 60m of wire would not make Top Band as an untuned broadband loop.

The limit on sensitivity is set by the external noise floor, as you enlarge an antenna you reach a point where there is no improvement in signal to noise just more of both. At low frequencies natural noise levels are very high so a loop a few m across is noise limited. There is little point in going above 2-3m at low HF while 1m is big for 30MHz.

Feeder loss is significant with small diameter cables at 300m long, a small diameter cable will loose around 20dB at 30MHz, a large diameter cable will be very expensive for a 3 reel run. Twin feeder works very well but needs supporting off the ground. Cat cable is available in one continuous length of 1000’ but will loose signal too.

I would suggest that you try a smaller loop at 100m from housing QRM, you might not find much difference to 50m in terms of noise levels, but it is much more practical.

Alan
G8LCO

Sent from Mail for Windows 10

From: 'david' zinc65@... [loopantennas]

11531. RE: [loopantennas] Broadband loop antenna amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-11 23:32:21 UTC
From: 3ym3ym@...
Topic: 11528 Message: 11531

Jim,

Another disadvantage of a 20m diameter loop compared to a small loop is absence of the deep null.
Small loops can be rotated to minimize their coupling to the electrical grid noise, thus maximize signal to noise ratio. 20m loop can not. I would expect it to be no better than a 20m wire in terms of signal to noise.

A preamp for small loop has totally different design goals compared to preamp for bigger loops and wires, as others already pointed out. Bigger loop preamp doesn't need the ultra low input impedance, but does need more strong signal handling capacity.

73, Mike

11532. For Sale is a 10" X 10", Tri-Coil, Dual Band, Ferrite Sleeve Loop Antenna (FSL)

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-21 19:28:58 UTC
From: everettsharp@...
Topic: 11532 Message: 11532
Attachments: 4 described; binary payloads are missing from this source WARC

I have for sale a 10" X 10" Tri-Coil, Dual Band, FSL. It is made using 86, 5 mm X 16 mm X 125 mm Russian ferrite bars, that are epoxied to the substrate. The ferrite is covered with 1/2" Polyethylene foam and has 3 coils, that are contra wound, using Double Layer 660/46 Litz wire.

The MW band coverage is 1700-635 KHz (with 3 coils in parallel). LW band coverage is 700-155 KHz (with 3 coils in series).The tuning capacitor is a high quality 2 gang 365 pF variable capacitor with a 8:1 tuning ratio and the band switch is a 4 PDT. The Lazy Susan is all aluminum. I have added a 50 ohm output so a desktop radio can be connected to the loop, by using a one turn coupling loop and a matching transformer so that when a radio is connected to it via the 50 ohm connection it does not destroy the loop Q. You can also induction couple to the loop by placing a portable radio near the loop. It can turn a very small portable radio in to a high performance radio.

I have built several FSL's and have sold them all, this is by far, the nicest and best performing one that I have built to date. It looks like a fine piece of furniture. I am asking $775. There will be an additional shipping cost, in addition to the asking price. If anyone is interested please contact me off list at everettsharp@....

Everett N4CY

11533. Drake AL-4 Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-22 19:37:05 UTC
From: hmholden69@...
Topic: 11533 Message: 11533

Does anyone have a link to show how how to build one of these loops. I have been told that a page exists somewhere on the internet.

11534. Re: [loopantennas] Drake AL-4 Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-22 20:59:07 UTC
From: Donald Tomkinson
Topic: 11533 Message: 11534

Hi ?.

A simple 'net search turned this up at Universal Radio (and many others):

http://www.universal-radio.com/catalog/commrxvr/al4a.html

Not much to it. A single turn of wire, a 1/4in fone plug and some
spreader arms and mast. Dimensions are in the write up.

I had thought of buying one but only for esthetics for the SPR-4 but
most sellers want ~$200 or more.....

More Live Radio Fun and a Whole Lot More!

Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
FRG-100B FunCube Dongle Pro+
ICF2010 Perseusx2 WR-G31DDCx3
R70 R71A w/250Hz R75x2 w/250Hz
PRN1000x2 SDR-IQ SPR-4 SSR-1
SR-AF & LPF DSP599zx MFJ-784B
HD-1418 AF-1 MSB-1
PA0RDT-MWx2 @ 20ft DXE-ARAV3-1Px2 @18ft
RYOAAx2 @ 20ft 28ft LF LNV
ALA100Lx2 Z1501F @20ft
Russian MW 15ft

On 22-Aug-16 12:37, hmholden69@... [loopantennas] wrote:
>
>
> Does anyone have a link to show how how to build one of these loops. I
> have been told that a page exists somewhere on the internet.
>
>
>
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11535. Re: [loopantennas] Drake AL-4 Loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-23 16:03:54 UTC
From: JRTOW3RD@...
Topic: 11533 Message: 11535

I had one in the eighties with my SPR-4 - it seems to me it was a single turn, but of RG-174. The shield would have been broken somewhere, ideally at the top, so that it would act as a Faraday shield, albeit an unbalanced loop. I also seem to recall that the loop preamp, part of every SPR-4 and SW-4, was a common-base BJT - a low-Z input. I DF-ed my powerline EMI by running the radio off a marine battery in the back of my pu truck as my wife drove me around my subdivision. The noise peaked at the pole in front of my house, as I had determined earlier by walking with an $8 AM pocket portable.

We had more LW NDB's then - the AL-4 would display a local MW null of ~3 S units, same as <50 mile distant NDB's. It connected via a 1/4" phone plug, which put a lot on of torque an strain on it as an 'axle'. The loop was frequently noisey - and even intermittent as you rotated it. My homebrew jFET/feritte rod loop, similar to Gerry Thomas' Radio+ current version, which I now have - great product - presented a lot better signal to my new NRD-525 then, so I sold the SPR-4/AL-4 combo most of three decadeJs ago. Nostalgia is tough - I still look at SPR-4 auctions!

I'd think one of Gerry's loops would be more useful, although at $200 + the extra cost $100 LW loop, it would cost more than the average $200 AL-4.

JRT

11536. RE: [loopantennas] Broadband loop antenna amplifier

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-28 15:46:29 UTC
From: makidoja@...
Topic: 11528 Message: 11536

Hi All

Sorry the 20m was based on the Welbrook loop, i think it's 20m overall wire length

I already have the LZ1AQ system here which works well but the antenna is for a different location.

I have also now looked at the cross country wirelss loop antenna HF Active Loop Antenna - Cross Country Wireless http://www.crosscountrywireless.net/active_loop_antenna.htm

http://www.crosscountrywireless.net/active_loop_antenna.htm

HF Active Loop Antenna - Cross Country Wireless
http://www.crosscountrywireless.net/active_loop_antenna.htm HF Active Loop Antenna Cross Country Wireless have released a HF Active Loop Antenna with a frequency range of 200 kHz to 70 MHz with extended coverag...

View on www.crosscountrywir... http://www.crosscountrywireless.net/active_loop_antenna.htm
Preview by Yahoo

and have spoken to the manufacturer about using Coax instead of the CAT cable which he is looking to possibly design.

LZ1AQ has also sent me details on how to take the signal via coax but leaving the control and voltage on the CAT, with increased voltage for losses.

I have no room for beverages, and I need the loop as far away from my transmitting antennas as possible, I have no option for a remote receiver, the loop null will be towards the transmitting antennas, which will be north from the RX loop, so the loop should work E/W

I currently have a multiband vertical 250m to the south with no preamp which works OK on 40 - 10 but I have nothing for the LF bands.

I was looking for a amplifier design for a Loop antenna which would give a flat response, I enjoy building my antennas.

So with the Cross Country in mind, what would design of preamp would work with this kind of loop dia?

Coax I'm using has a loss of 3.6db over 100m @ 50mhz and will be shield grounded at the base of the antenna and before entering the shack.

Jim M0CKE

11538. Survivaltech Nord: Chameleon P-Loop vs Alpha Coaxial Loop - MUST SEE before buying!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-08-28 23:40:34 UTC
From: oliver_watt_000@...
Topic: 11538 Message: 11538

The Survivaltech Nord YouTube channel made a very video when he compares the Chameleon P-Loop vs Alpha Coaxial Loop. It's very good and informative video! MUST SEE before buying!

Magloop Quality Comparison Chameleon P-Loop vs Alpha Coaxial Loop Series https://www.youtube.com/watch?v=DR-VBopiZL4&feature=youtu.be

https://www.youtube.com/watch?v=DR-VBopiZL4&feature=youtu.be

Magloop Quality Comparison Chameleon P-Loop vs Alp... https://www.youtube.com/watch?v=DR-VBopiZL4&feature=youtu.be In this video we're doing a quality comparison between the Chameleon P-Loop, and the Alpha Coaxial Loop series. Visit my -Alpha Loop page http://www....

View on www.youtube.com https://www.youtube.com/watch?v=DR-VBopiZL4&feature=youtu.be
Preview by Yahoo

- Oliver

11540. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-01 13:17:44 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11540

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11541. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-01 13:17:44 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11541

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11542. Re: [loopantennas] For Sale is a 10" X 10", Tri-Coil, Dual Band, Ferrite Sleeve Loop Antenna (FSL)

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-07 13:39:55 UTC
From: Everettsharp
Topic: 11532 Message: 11542

This FSL has sold.

Everett N4CY

Sent from my iPhone

> On Aug 21, 2016, at 3:28 PM, everettsharp@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> I have for sale a 10" X 10" Tri-Coil, Dual Band, FSL. It is made using 86, 5 mm X 16 mm X 125 mm Russian ferrite bars, that are epoxied to the substrate. The ferrite is covered with 1/2" Polyethylene foam and has 3 coils, that are contra wound, using Double Layer 660/46 Litz wire.
>
> The MW band coverage is 1700-635 KHz (with 3 coils in parallel). LW band coverage is 700-155 KHz (with 3 coils in series).The tuning capacitor is a high quality 2 gang 365 pF variable capacitor with a 8:1 tuning ratio and the band switch is a 4 PDT. The Lazy Susan is all aluminum. I have added a 50 ohm output so a desktop radio can be connected to the loop, by using a one turn coupling loop and a matching transformer so that when a radio is connected to it via the 50 ohm connection it does not destroy the loop Q. You can also induction couple to the loop by placing a portable radio near the loop. It can turn a very small portable radio in to a high performance radio.
>
> I have built several FSL's and have sold them all, this is by far, the nicest and best performing one that I have built to date. It looks like a fine piece of furniture. I am asking $775. There will be an additional shipping cost, in addition to the asking price. If anyone is interested please contact me off list at everettsharp@....
>
> Everett N4CY
>
> <Untitled.jpg><Untitled.jpg>
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> <image001.jpg>
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> <image002.jpg>
>

11543. Re: Multi Turn Loops

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-07 01:48:31 UTC
From: david.balcaen@...
Topic: 11012 Message: 11543
Attachments: 1 described; binary payloads are missing from this source WARC

Hi Paul, David Balcaen VE2GYA here.

I am contemplating something similar, and wonder if you ever got a response?

My approach is to feed the 80m loop in the centre of one of the long sides, then "double up" the wire, all the way around then back again, to make the loop. 3 inch spacing between the runs. My thinking is the highest current will be at the feed point, then the zig, zag wires will be on the other three sides only, and provide proper matching for 80m.

I have a first version up, but it resonates at 4.2 mhz, so not all that useful. It tuned up okay on 80m with SGC230 at the feedpoint, with good reception reports, but I want to make it resonant. I am new to this group, so will try to upload an image of my planned antenna, in case anyone cares to comment before I put the day of work into getting it up on the roof.

73,

de VE2GYA

David Balcaen

11544. SWL Receive Array

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-21 20:00:22 UTC
From: jjdobrikin@...
Topic: 11544 Message: 11544

Hi
Does any one have experience with and/access to Antenna Modeling/Design software?

I am researching the use of Loop Antenna(s) for receive only BCB/Shortwave in several arrays.

Also looking for information, ideas, designs of remotely tuning Loop)s).

The plan is for Antenna(s) to be mounted in an attic and and combing them to get something resembling 360 degrees reception.

For a/the first antenna I am looking at mounting a circular all in the same plane, on the surface of a light weight, hollow core, plywood, interior door, allowing a diameter of 28" on a 30" door.

Initially I am looking into two separate Antennas/Designs. One 550 Kilocycles, up to as far into the HF band(s) as is electrically and mechanically feasible; and the second in the other direction say 21 Megacycles down.

Then placing the doors at right angles to each combining their output to the receiver. Initially with a 4 to 1 Combiner Board made by a Ham in Malaysia that builds amplified four receivers to one Antenna Boards, and has built me a passive 3db loss, Combiner board using the same printed circuit board as his amplified board.

After the above I want to try connecting the antennas at their Base and sharing one Coax down lead to the radio.

After the above it gets even more wild. I want to look at four antennas in/on the surfaces a square box with an X insert. Here the plan would be to try four identical Loops sharing one variable capacitor and down lead.

Keep in mind that I am not interested in Nulls but sort of a ersatz, remote tuning, wide(ish) band omni- directional, 360 degree antenna.

OK. Now that you have stopped laguhing or crying, give me some constructive criticism.
73 ve7jjd

11545. SW Receive Array

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-21 21:30:57 UTC
From: Jordan Dobrikin
Topic: 11545 Message: 11545

Hi
Does any one have experience with and/access to Antenna Modeling/Design software?

I am researching the use of Loop Antenna(s) for receive only BCB/Shortwave in several arrays.

Also looking for information, ideas, designs of remotely tuning Loop)s).

The plan is for Antenna(s) to be mounted in an attic and and combing them to get something resembling 360 degrees reception.

For a/the first antenna I am looking at mounting a circular all in the same plane, on the surface of a light weight, hollow core, plywood, interior door, allowing a diameter of 28" on a 30" door.

Initially I am looking into two separate Antennas/Designs. One 550 Kilocycles, up to as far into the HF band(s) as is electrically and mechanically feasible; and the second in the other direction say 21 Megacycles down.

Then placing the doors at right angles to each combining their output to the receiver.
Initially with a 4 to 1 Combiner Board made by a Ham in Malaysia that builds amplified four receivers to one Antenna Boards, and has built me a passive 3db loss, Combiner board using the same printed circuit board as his amplified board.

After the above I want to try connecting the antennas at their Base and sharing one Coax down lead to the radio.

After the above it gets even more wild. I want to look at four antennas in/on the surfaces a square box with an X insert. Here the plan would be to try four identical Loops sharing one variable capacitor and down lead.

Keep in mind that I am not interested in Nulls but sort of a ersatz, remote tuning, wide(ish) band omni- directional, 360 degree antenna.

OK. Now that you have stopped laguhing or crying, give me some constructive criticism.
73 ve7jjd

11546. Re: [loopantennas] SW Receive Array

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-22 06:41:17 UTC
From: Brian
Topic: 11545 Message: 11546

Hi,
This article may give you a few hints on the ‘ door ‘ idea,

Use your closet door as "super loop" -- on hard-core-dx.com
www.hard-core-dx.com/nordicdx/antenna/loop/loop5.html

72, Brian, GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Wednesday, September 21, 2016 10:30 PM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] SW Receive Array

11547. Re: Please Read and Support the Passage of HR 1301 in the Senate

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-22 14:49:14 UTC
From: James R. La Frieda
Topic: 11547 Message: 11547

Please take two minutes of your time to send a letter to your two Senators in support of HR 1301 which unanimously passed in the House of Representatives.

The passage of this bill will enable all of us to have a magnetic loop antenna at our residence, even though we now have CC&R's.

Simply click on the URL below and fill in your zipcode, name, address, and e-mail address.

That's all it takes, for the letter is already composed - and it will be addressed to your Senators, courtesy of the ARRL.

Many thanks in advance, for your help and support.

All the Best,

73, Jim (N6MV)

Date: September 22, 2016
Subject: HR 1301 - Amateur Radio Parity Act - Senate Letters

We have an opportunity to positively affect Amateur Radio for years to come. H.R. 1301, the Amateur Radio Parity Act, has unanimously passed the House of Representatives and moved on to the Senate for consideration. All you need to do is spend two minutes of your time to send an email to your two Senators supporting the Bill. By doing so, you will have helped the future of Amateur Radio by guaranteeing our ability to have an effective outdoor antenna in a deed-restricted community.

The number of people living in such communities grows exponentially each year. Often, a ham homeowner has no choice but to live in a community restricted by covenants. There are nearly 3/4 of a million licensed hams in the United States, more than ever before. But that may change if we are forced to live in a community that refuses to allow an antenna.

Help yourself and help your fellow hams. Go to this link:

https://arrl.rallycongress.net/ctas/urge-senate-to-support-amateur-radio-parity-act

Enter your zip code and follow the prompts. The letters are there.
All you need to do is fill in the blanks, hit save, then send.

That’s it. Under 2 minutes and you’re done.

If you haven’t yet done so, please do so today. Your voice counts!

11548. Re: SW Receive Array

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-22 15:09:38 UTC
From: owlpoop@...
Topic: 11545 Message: 11548

Hi, Jordan. I use a free antenna modeling program called MMANA which works quite well. I've built a number of antennas using it and they work as predicted. Included is a large library of designs which will help you learn to use the program and understand it's features.

The website is: MMANA-GAL - MM HamSoft http://hamsoft.ca/pages/mmana-gal.php

73 bill w4hbk

http://hamsoft.ca/pages/mmana-gal.php

MMANA-GAL - MM HamSoft http://hamsoft.ca/pages/mmana-gal.php Official English Website distributing and supporting amateur radio programs by JE3HHT

View on hamsoft.ca http://hamsoft.ca/pages/mmana-gal.php
Preview by Yahoo

11549. Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-26 22:09:59 UTC
From: jjdobrikin@...
Topic: 11549 Message: 11549

Hi

I am in the final phase of designing and building an Indoor SWL Receive Only Loop Antenna.

I plan on a loop diameter of twenty- eight inches 28" maximum practical size for an interior hollow core door.

My first question is what Loop Wire should I use, Litz, Stranded (speaker/zip cord), Solid (what gauge?),
Coax (what Type?).

For an alternate design, I am looking at foam Insulation/builders board again in 28" to 30" diameter with a Satellite Dish Rotor to mount on a protected outdoor balcony on the 8th floor and top,19th floor of a concrete & steel Apartment Building.

The Satellite Rotor is somewhat unigue. In that allows positioning and RF on a single Coax cable as well as azimuth and elevation positioning

Answers, comments and or constructive criticism requested.

73 ve7jjd

11550. Re: [loopantennas] Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-27 05:57:38 UTC
From: Andy
Topic: 11549 Message: 11550

For a receive-only shortwave loop, I think any wire would be OK. So pick one that is inexpensive and easy to work with. Whether that's solid or stranded, it's up to you. I think a small gauge (larger AWG number) is probably OK, because antenna "gain" is not very important for receiving purposes on shortwave frequencies. HF reception is usually dominated by received noise, e.g. cosmic noise, not by the noise in the receiver, and the level of noise ultimately determines how quiet the signal is that you can just listen to.

I think Litz wire is probably overkill for a shortware receive-only antenna wire, for the same reasons.

Coax too. (Although, there are so-called "shielded loop" antennas using coax, which are supposed to reduce reception of man-made noise. But the shielding doesn't actually shield the antenna from receiving anything undesirable; what the shield does, is help make the loop electrically balanced, which is good.)

Antennas like this are often hotly debated, so I'm sure there are people who dispute what I wrote.

Andy

11551. Re: [loopantennas] Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-27 07:36:26 UTC
From: John
Topic: 11549 Message: 11551

It depends on what type of loop antenna, tuned or untuned.

If a tuned antenna, Litz wire doesn't have much effect above about 3 MHz. 18 gauge or large diameter (smaller number, 14, 12, etc) is preferred, or occasionally the outer conductor of coax cable.

For an untuned loop used with a very low impedance amplifier, large diameter is preferred, coax shield or copper pipe.

Smaller wire will work, and the test is always does the antenna pick up more signal than the noise generated inside the receiver. If, when the antenna is connected to the receiver, the background noise changes from a very smooth hiss, to a more uneven, stronger, noise, then the antenna is working, and a more perfect wire won't make much difference.

Your Mileage May Vary.

Mose of the long wire antennas I've put up in the last 60+ years have been about 24 ga wire.

John

On 9/26/2016 10:57 PM, Andy ai.egrps@... [loopantennas] wrote:
>
>
> For a receive-only shortwave loop, I think any wire would be OK. So
> pick one that is inexpensive and easy to work with. Whether that's
> solid or stranded, it's up to you. I think a small gauge (larger AWG
> number) is probably OK, because antenna "gain" is not very important for
> receiving purposes on shortwave frequencies. HF reception is usually
> dominated by received noise, e.g. cosmic noise, not by the noise in the
> receiver, and the level of noise ultimately determines how quiet the
> signal is that you can just listen to.
>

11552. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-27 14:48:57 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11552

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /MONTAGE INSTRUKTIE LOOP VERSTERKER S-120-B DOC.doc
Uploaded by : jorschei <kthkit@...>
Description : In Dutch artikel; Wideband active receiving loop antenna
I use this WB loop antenna for many years now in the attic under the roof with good
results.
Useful from aprox 150 KHz up to 144 MHz
It may also an useful antenna for mobile hiking.

Wander if someone has built this type and have some results.
73"Joris PE1KTH

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/MONTAGE%20INSTRUKTIE%20LOOP%20VERST
ERKER%20S-120-B%20DOC.doc

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

jorschei <kthkit@...>

11553. Re: Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-28 18:04:36 UTC
From: 3ym3ym@...
Topic: 11549 Message: 11553

Agree with Andy and John, wire type is not that important for the loop (except the untuned loop loaded to a low input impedance amplifier).
Remember that the main advantage of the loop is not gathering more signal, but the ability to null the single strongest noise source, thus providing the best Signal to Noise ratio. This is why the better balanced shielded loop is used, as Andy mentioned. It has a deeper null if loaded properly.

73, Mike

11554. R: [loopantennas] Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-27 09:28:18 UTC
From: Gabriele Martini
Topic: 11549 Message: 11554

An interesting site:
http://www.lz1aq.signacor.com/docs/fa-eng/Weak_signals-mag_loop_engl.htm

On My opinion the copper tubing or multilayer Aluminum is the best option. I built up several resonating loops with wire, but tubing has higher Q and bandwidth. I had good results with varactors also, especially BB112. With a cathode to cathode mounting (no condensers) and 32" (81 cm) copper tubing of 12mm I cover from 6 to 30 mhz.

----- Messaggio originale -----
Da: "jjdobrikin@... [loopantennas]" <loopantennas@yahoogroups.com>
Inviato: □27/□09/□2016 00:10
A: "loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Oggetto: [loopantennas] Loop Material

Hi

I am in the final phase of designing and building an Indoor SWL Receive Only Loop Antenna.

I plan on a loop diameter of twenty- eight inches 28" maximum practical size for an interior hollow core door.

My first question is what Loop Wire should I use, Litz, Stranded (speaker/zip cord), Solid (what gauge?),
Coax (what Type?).

For an alternate design, I am looking at foam Insulation/builders board again in 28" to 30" diameter with a Satellite Dish Rotor to mount on a protected outdoor balcony on the 8th floor and top,19th floor of a concrete & steel Apartment Building.

The Satellite Rotor is somewhat unigue. In that allows positioning and RF on a single Coax cable as well as azimuth and elevation positioning

Answers, comments and or constructive criticism requested.

73 ve7jjd

11555. Re: R: [loopantennas] Loop suggestion

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-30 19:28:40 UTC
From: jjdobrikin@...
Topic: 11549 Message: 11555

[Body unavailable in the source archive]

11556. Re: R: [loopantennas] Loop Rotation

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-30 19:31:05 UTC
From: jjdobrikin@...
Topic: 11549 Message: 11556

Conversation opened. 2 messages. All messages read.

Skip to content https://mail.google.com/mail/u/0/
Using Gmail with screen readers https://mail.google.com/mail/u/0/

https://accounts.google.com/SignOutOptions?hl=en&continue=https://mail.google.com/mail&service=mail" title="Google Account: Jordan Dobrikin (jjdobrikin@gmail.com)

https://mail.google.com/mail/u/0/#inbox

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COMPOSE

Labels Inbox https://mail.google.com/mail/u/0/#inbox

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Sent Mail https://mail.google.com/mail/u/0/#sent

Drafts https://mail.google.com/mail/u/0/#drafts

Circles https://mail.google.com/mail/u/0/#circle

More

Hangouts

More

2 of 69

[MagLoop] Magnetic loop antenna Inbox
x

'Dale Parfitt' parinc1@frontier.com [MagLoop]
6:00 PM (18 hours ago)
Why not build a broadband loop and avoid the hassle of tuning. A differential...

Jordan Dobrikin <jjdobrikin@gmail.com> 8:14 PM (16 hours ago)

to MagLoop

Hi How many turns in your Loop?

A tip to those who are into remotely controlled Loop Antennas, Satellite Antenna Rotors. 180 degrees Azimuth, Horizontal to Vertical positioning. RF and control thru one coaxial cable.

MOTECK SG-2100 SATELLITE DISH MOTOR FTA HH SG2100 ROTOR MOTORIZED FREE TO AIR 33
Be the first to write a review
http://www.ebay.com/urw/write-review/1473904051?_itm=381671391122
Email to friendsShare on Facebook - opens in a new window or tab http://www.ebay.com/soc/share?du=http%3A%2F%2Fwww.ebay.com%2Fitm%2F-%2F381671391122&rt=nc&t=MOTECK+SG-2100+SATELLITE+DISH+MOTOR+FTA+HH+SG2100+ROTOR+MOTORIZED+FREE+TO+AIR+33&spid=2047675&itm=381671391122&media=http%3A%2F%2Fgalleryplus.ebayimg.com%2Fws%2Fweb%2F381671391122_1_0_1%2F1000x1000.jpg&swd=2&shorten=0Share on Twitter - opens in a new window or tab http://www.ebay.com/soc/share?du=http%3A%2F%2Fwww.ebay.com%2Fitm%2F-%2F381671391122&rt=nc&spid=2047675&itm=381671391122&media=http%3A%2F%2Fgalleryplus.ebayimg.com%2Fws%2Fweb%2F381671391122_1_0_1%2F1000x1000.jpg&swd=3&lang=en&t=Check+out+MOTECK+SG-2100+SATELLITE+DISH+MOTOR+FTA+HH+SG2100+ROTOR+MOTORIZED+FREE+TO+AIR+33Share on Pinterest - opens in a new window or tab http://www.ebay.com/soc/share?du=http%3A%2F%2Fwww.ebay.com%2Fitm%2F-%2F381671391122&rt=nc&spid=2047675&itm=381671391122&media=http%3A%2F%2Fgalleryplus.ebayimg.com%2Fws%2Fweb%2F381671391122_1_0_1%2F1000x1000.jpg&swd=11&t=MOTECK+SG-2100+SATELLITE+DISH+MOTOR+FTA+HH+SG2100+ROTOR+MOTORIZED+FREE+TO+AIR+33

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Item condition:
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05d 20h 06m

Quantity:
More than 10 available / 22 sold http://offer.ebay.com/ws/eBayISAPI.dll?ViewBidsLogin&item=381671391122&rt=nc&_trksid=p2047675.l2564

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High Efficiency
Compact Structure
Ultra Low Noise
Easy Installation with LED Indicator
Manual EAST / WEST button
For Dish up to 1.2M
Specification: Model SG2100A Antenna Diameter 1.2M Max. Length of Motor Tube 18cm Azimuth Angle 75˚EAST ~ 75˚WEST (150˚) Adjustable Elevation Angle 10˚~75˚ Input / Output Voltage 13 / 18 VDC Power Consumption 50 mA (Standby mode)
200mA (Normal)
350 mA (Max.)
Rotation Speed 1.9˚ / sec (at 13V) ; 2.5 ˚/ sec (at 18V) Satellite Positions 60 Connector F Type Command Protocol DiSEqC 1.2 Resynchronize Function YES Goto Position 0 Function YES Goto X Function YES Positioning Sensor Hall Effect Sensor EAST / WEST Limit Adjustable Hardware and Programmable Software Manual Button EAST / WEST

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Details

'Dale Parfitt' parinc1@frontier.com [MagLoop] Add to circles

Show details

11557. Re: R: [loopantennas] Loop Rotation

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-09-30 23:53:01 UTC
From: jjdobrikin@...
Topic: 11549 Message: 11557

100% ORIGINAL MOTECK V-BOX II SATELLITE POSITIONER

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THIS IS AN ORIGINAL MOTECK, THIS IS NOT A CLONE PRODUCT LIKE MOST POSITIONERS SOLD TODAY vbox II is the last version manufactured by Moteck, all later versions are Clone and not manufactured by Moteck

OPTIONAL REMOTE CONTROL IS INCLUDED

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Compatible with DiSEqC 1.0 /1.2 RECEIVER or Any Receiver
Compatible with any Reed Switch Actuator or H-H Mount
re-synchronize Function
3 Digit LED Display
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99 Satellite Positions
60 Programmable Memories
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Overload Protection (Auto-recovery)
Anti-Noise Design
Remote Control Included
NOTE that the power specs are for North American Standards.

V-BOX II Input: 110 VAC / 60 Hz Output: 36 VDC Max. Dish Diameter: 3M / 5M Max. Output Current: 2.5A~ / 4.2A~ Max. Power Consumption: 80W / 100W Protocol: DiSEqC 1.0 / 1.2 Positions Memories: 60 Controlled by: DiSEqC 1.2 / 1.0 Receiver or Optional Remote Control Display: 3 Digits LED Resynchronize Function: YES Manual Buttons: Power ON / OFF, EAST / WEST Protection: Software Limit Protection Electric Overload Protection

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http://search.ebay.ca/_W0QQsassZelectoricaQQhtZ-1 Buy and sell electronics, cars, fashion apparel, collectibles, sporting goods, digital cameras, baby items, coupons, and everything else on eBay, the w...

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WE SHIP WORLDWIDE, PLEASE ALLOW 4 TO 15 DAYS FOR DELIVERY
MOST ITEMS ARE SHIPPED WITHIN 24 HOURS (EXCLUDING HOLIDAYS)
ITEMS SHIPPED INTERNATIONAL MAY TAKE A FEW DAYS LONGER
WE DO NOT OFFER ANY TYPE OF INSTALLATION OR PROGRAMMING INSTRUCTIONS OF ANY KIND
PROFESSIONAL INSTALLATION OR PROGRAMMING RECOMMENDED.
WE DO NOT OFFER ANY WARRANTY OR PROGRAMMING IN REGARDS TO MISUSE OR FALSE OPERATION.
DEFECTIVE ITEMS MUST BE RETURNED BY BUYER.
SOME AREAS MAY BE MORE EXPENSIVE TO SHIP, WE RESERVE THE RIGHT TO REFUSE A SALE FOR ANY REASON.
WE SHIP FROM CANADA OR USA, WE DO NOT SHIP UNDER YOUR FEDEX OR UPS ACCOUNT
WE SHIP VIA USPS, CANADA POST, UPS BASED ON SIZE AND WEIGHT OF YOUR PURCHASE

11558. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-01 12:54:36 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11558

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11559. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-01 12:54:36 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11559

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11560. Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-03 18:15:06 UTC
From: dannibou@...
Topic: 11560 Message: 11560

Hi. I read some articles on the shielded loop and the majority use a single wire round coupled with a preamp. One article said that this antenna covered the SW band and another article proposed a identical loop of the same size but which covered the AM band. Should I assume that a single turn can cover multiple frequencies? Where is the difference? In the preamp? Thanks for Any explanation.
Danny

11561. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-03 19:28:54 UTC
From: Dick Bingham
Topic: 11560 Message: 11561

Hello Danny

Check this website out and see if you can learn some loop-tricks ===>

*http://www.66pacific.com/calculators/small_tx_loop_calc.aspx
<http://www.66pacific.com/calculators/small_tx_loop_calc.aspx>*

Mess around with wire diameters and see what it "costs" you.

I fabricated a TX/RX-loop using 10-feet of 3/8th-inch copper tubing and
a coupling loop. It is tuned to 10.138700MHz and I am running 5-watts
into it.

GREAT reports from all over the USA, JA, KH6.VK and ZL. So far no EU
copy or decodes.

73 Dick/w7wkr and wd2xsh-26 at CN98pi and NPOTA unit RC12

On Mon, Oct 3, 2016 at 11:15 AM, @... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Hi. I read some articles on the shielded loop and the majority use a
> single wire round coupled with a preamp. One article said that this
> antenna covered the SW band and another article proposed a identical loop of
> the same size but which covered the AM band. Should I assume that a single
> turn can cover multiple frequencies? Where is the difference? In the
> preamp? Thanks for Any explanation.
>
> Danny
>
>
>

11562. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-03 20:11:59 UTC
From: dannibou@...
Topic: 11560 Message: 11562

Thanks Dick but I forgot to mention that it's for receive only. I still can not understand the relationship between a loop of the same diameter for different frequencies. Thanks for help.
Danny

11563. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-03 20:24:23 UTC
From: gnuarm.2007@...
Topic: 11560 Message: 11563

A loop antenna of any practical size for any but the highest frequencies is "small" compared to the wavelength. So the size of the loop is not so important to it's operation for receive having only an impact on the signal strength across all frequencies (larger gives a stronger signal, but also more noise so not improving the received SNR). The loop is a fixed inductor and is tuned by adjusting the capacitance added.

It is possible to use a loop without tuning in which case the size of the loop still has little impact unless you are near self resonance which is largely determined by the loop construction.

Regards,

Rick C.

---In loopantennas@yahoogroups.com, <dannibou@...> wrote :

Thanks Dick but I forgot to mention that it's for receive only. I still can not understand the relationship between a loop of the same diameter for different frequencies. Thanks for help.
Danny

11564. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-03 21:04:16 UTC
From: dannibou@...
Topic: 11560 Message: 11564

Thank Rick. That explain why a loop can be effective for different band. Anyway, I prefer tuned loop but for a shielded one. it's hard to find a site with a diagram and construction plans. Money, electronic and mechanical issue are not a problem. Just need a good "how to" site.
Danny

11565. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-03 21:56:02 UTC
From: Jordan Dobrikin
Topic: 11560 Message: 11565

Hi
I have also been reading and researching thru the Internet for good HF SWL Receive only antenna including Loops remotely tuned.

Would you be able to give us link(s) of the article(s) with the conflicting information?

From my research and reading I have come with the following guidelines.

A single Long turn, Low Inductance, over the widest Area possible, establishes the highest usable frequency.

I am looking at 4 by 8 foot Foam board with a circle of 39" diameter, and/or a square 39" per side, as well as a larger rectangle 39" by 48"/50" to get a longer wire Length and larger Area.

The lowest usable frequency is a function of the distributed capacitance and maximum of the variable tuning capacitor.

Longer wire Length, more Turns, gives a lower usable frequency but it lowers the highest usable frequency.

Loop conductor is a function of your mechanical construction skills and ones search of the Holy Grail of low inductance and maximum surface area of the conductor(s).

Pipe Copper or Aluminum
Thin metal bar stock 2' to 3" wide 1/16' or less
Wire: multi strand speaker/zip cord, Litz Wire, Flexweave, Ribbon Cable (wired in parallel), sold core wire.

If one goes for Passive the the Pickup Loop is a toss. Very little in the literature comparing the different designs and wire type(s)

Long lead ins call for low noise pick up Coaxial Cable.

Active Amplifiers are wide band and do not effect the highest usable frequency which is determined by the physical parameters of the loop. Most have mechanisms to add capacitance to define the lowest usable Frequency.

73 Jordan ve7jjd

On Mon, Oct 3, 2016 at 11:15 AM, dannibou@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Hi. I read some articles on the shielded loop and the majority use a

> single wire round coupled with a preamp. One article said that this
> antenna covered the SW band and another article proposed a identical loop of
> the same size but which covered the AM band. Should I assume that a single
> turn can cover multiple frequencies? Where is the difference? In the
> preamp? Thanks for Any explanation.
>
> Danny
>
>
>

11566. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-03 23:15:01 UTC
From: Richard (Rick) Karlquist
Topic: 11560 Message: 11566

On 10/3/2016 2:04 PM, dannibou@... [loopantennas] wrote:
>
> Thank Rick. That explain why a loop can be effective for different band.
> Anyway, I prefer tuned loop but for a shielded one. it's hard to find a
> site with a diagram and construction plans. Money, electronic and
> mechanical issue are not a problem. Just need a good "how to" site.
>
> Danny
>

Since you asked, here is a construction article:

http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

As shown, the loop covers about a 3:1 frequency range,
about 1.6 to 5.5 MHz. If you add additional tuning diodes
you can get it to cover the AM broadcast band. It will
have less sensitivity there because it is smaller in
terms of wavelength, but that's OK because the signals
in the broadcast band are much stronger than SW.
If the loop is reduced to a circumference of 10 feet,
and only one tuning diode is used, it can cover up
to 10 MHz or so.

I have unloaded PC boards available.

Rick N6RK

11567. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-04 06:56:19 UTC
From: John
Topic: 11560 Message: 11567

Untuned loop antennas are broadband. the Wellbrook Communications ALA1530 antenna, for example, has a frequency range of 40 kHz to 30 MHz.

The amplifiers which are part of the loop antennas sometimes restrict the frequency range. An antenna designed only for HF, for example, might have filters to attenuate the MW broadcast band to prevent the higher power signals there from overloading the ante,na or connected receiver.

There are several good homebrew untuned loop antenna designs floating around on the internet.

Tuned loop antennas are a different subject. The frequency response of those depends on the minimum and maximum values of capacitance that are available to tune the antenna to resonance. These are best used for transmitters only for shortwave because of the inconvenience of retuning the antenna for each frequency change, but are common for medium wave only receiving.

John
KK6IL

On 10/3/2016 1:11 PM, dannibou@... [loopantennas] wrote:
>
>
> Thanks Dick but I forgot to mention that it's for receive only. I still
> can not understand the relationship between a loop of the same diameter
> for different frequencies. Thanks for help.
> Danny
>
>
>

11568. Re: WiMo baby loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-04 13:38:48 UTC
From: dexterpatrick@...
Topic: 8349 Message: 11568

I am in the process of replicating the "Baby Loop". I so far have managed to get someone to roll a 50mm x 2mm AL tube for me.. I also have sent the capacitor plates to laser cutting service before welding them together.

11569. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-04 16:18:50 UTC
From: kthkit@...
Topic: 11560 Message: 11569

Hi John,

look in the files; MONTAGE INSTRUKTIE LOOP VERSTERKER S-120-B DOC.doc
It is in Dutch bud you will understand the schematic.
I use this stable amplifier for years now from aprox 150 KHz up to 144 MHz with a +20 dB gain amplifier.
Did make also APT sat pictures with this antenna and my KTH-SDR receiver.
It is a wide band antenna for LW, MW,SW up to VHF, Do you need more frequency ?

On the RF output you can connect band filters and or attenuators if you receiver not strong and become overloaded.
It is not a kit anymore bud I have the PCB layout in GIF format.
Shall put the photos in the photo map.

Joris KTH rf -Design

11570. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-04 18:06:57 UTC
From: kthkit@...
Topic: 11560 Message: 11570

Hi Danny,
An shorted loop is a closed winding and not tuned because it is a shorted winding.
The electric field is therefore shorted as well and only a magnetic field will introduce a current in the loop. Many magnetic frequency components induct a current.
A small part of the inductance is in this closed loop circuit the input winding of the input balance transformer.
Of coarse there is a difference if an aluminum strip is used with a low self inductance and low skin los.
A thin wire as a loop has a greater loss and more self induction bud the amplifier amplify all incoming signals and compensate the loss.
The sensitivity lobs shell be different depending on frequency, loop parasitic capacity and amplifier load.
Anyhow this closed loop works well in a broad spectrum and I used this principle also for world radio design with the Silicon Land AM/FM shortwave Si4835 receiver chip successfully.
With a loop diameter of 70 cm many middle east stations and fro china has been received.
Those station are strong of course.

73”Joris KTH rfr-Design

11571. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-04 21:24:29 UTC
From: dannibou@...
Topic: 11560 Message: 11571

Hi and thanks for the reply. I understand the principle of the shielded loop. I'll try to build one the next winter and let you know my results.
Danny

11572. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-05 13:13:37 UTC
From: Dexter D Xer
Topic: 11560 Message: 11572

I have two home-brew construction articles for receiving antennas in the files section:

ElectricallySmallResonantLoopForMediumWave.pdf
<https://xa.yimg.com/df/loopantennas/ElectricallySmallResonantLoopForMediumWave.pdf?token=S4FM5Atirhj611Gkqonif8co2-2I0gmq9F7j9hbZdoNb8vtMqttlsgoSWgMAuE7xU_hpOKT6y9i6PrA7M_cEYMj6FnwXHGCW84h9CjNrSWnIgu1XevoxAhnPJhbUP0texu9Zb7__WDsOXE5lWA&type=download>

and
Electrically Small Resonant Loop for Shortwave (Oct '14).pdf
<https://xa.yimg.com/df/loopantennas/Electrically+Small+Resonant+Loop+for+Shortwave+%28Oct+%2714%29.pdf?token=WDNvkEZTNH4_FHLWt1g66LNzklGFcXfJH0dDMdMA_CnPM2YfldDsePowA_2p077hgMMYxJckW6w2kRHOtV_WBm2sG6kE38ApRreyT54n4u8D_x_BB82QgjPSM2lom7Noc_ORyKt9c_bd1odUtLVclhVuXGQNMwGXmeOoKkUlSYybZJvYIFX88f9yA6lsBx0&type=download>

These are based on basic loop antenna theory contained in numerous engineering articles published in the early days of radio, many of them from the Proceedings of the IRE/IEEE. They are passive, resonant loops, transformer coupled to a low-impedance pick-up coils, which feed the receiver through twisted pairs.

Transformer coupling allows the primary circuit to "freewheel" in space under a minimum load, which results in a very high Q (i.e., narrow band response).

The pick-up coil on the medium wave antenna, is in fact shielded. It is also possible to produce ideal nulls by balancing the primary coil. My experience is that shielding should only be used for low-impedance, non-resonant coils, as the capacitance from the shield greatly limits the inductance of a resonant coil.

Why? For electrically small loops, the "effective height" is directly proportional to the NA product, where N is the number of turns and A the area of each turn. Thus, it pays to maximize the inductance:capacitance ratio for a resonant antenna.

The pick-up coil should produce an output impedance roughly matching the input impedance of the receiver. For antennas having a limited tuning range, it will be possible to do this with a single coil. However, for those designed for large SW tuning ranges, it will be necessary to adjust the size of the pickup coil with a tapped switch or perhaps using a series-fed, low-impedance tuned circuit.

I am fortunate to have a shack in a second-floor room in a frame house. The antennas perform quite well beside the radio, and I have never had to contend with remote tuning.

Regards,

Bob C.

11573. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 14:14:19 UTC
From: Chris Trask
Topic: 11560 Message: 11573

Look in the group files section for the PDF document "Shielded Loop Aerials Rev 0.pdf". I describe how to build a remotely tuned shielded loop in that paper.

-----Original Message-----
>From: "dannibou@... [loopantennas]" <loopantennas@yahoogroups.com>
>Sent: Oct 3, 2016 2:04 PM
>To: loopantennas@yahoogroups.com
>Subject: Re: [loopantennas] Shielded loop question
>
>Thank Rick. That explain why a loop can be effective for different band. Anyway, I prefer tuned loop but for a shielded one. it's hard to find a site with a diagram and construction plans. Money, electronic and mechanical issue are not a problem. Just need a good "how to" site.
> Danny
>

Chris Trask
N7ZWY / WDX3HLB
Senior Member IEEE
http://www.home.earthlink.net/~christrask/

11574. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 18:44:31 UTC
From: Jordan Dobrikin
Topic: 11560 Message: 11574

Hi
73 Jordan ve7jjd

http://wiki.radioreference.com/index.php/Making_a_Receive_Loop_Antenna

http://www.qsl.net/va3iul/Homebrew_RF_Circuit_Design_Ideas/Multi-Q_RX_Loop_Antenna.gif

http://www.hard-core-dx.com/nordicdx/antenna/loop/hulaloop.html

https://www.google.ca/search?q=ElectricallySmallResonantLoopForMediumWave.pdf+&ie=utf-8&oe=utf-8&gws_rd=cr&ei=EUf1V5z1JZD8jwPx-rToCQ

http://www.frontiernet.net/~jadale/My%20Loop%20Antennas.htm

https://mail.google.com/mail/u/0/#inbox/1574e377ba5eca99

file:///C:/Users/Jordan%20Dobrikin/Downloads/-AM%20LOOP%20ANTENNAS%20(3).pdf

https://www.google.ca/search?

q=ElectricallySmallResonantLoopForMediumWave.pdf+&ie=utf-8&oe=utf-8&gws_rd=cr&ei=4x_1V_nOH5DCjwOwhYnABA

http://www.randombio.com/loopantenna.html

http://www.w8ji.com/noise.htm

http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

http://www.lz1aq.signacor.com/docs/fa-eng/Weak_signals-mag_loop_engl.htm

On Thu, Oct 6, 2016 at 7:14 AM, Chris Trask christrask@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Look in the group files section for the PDF document "Shielded Loop
> Aerials Rev 0.pdf". I describe how to build a remotely tuned shielded loop
> in that paper.
>
> -----Original Message-----
> >From: "dannibou@... [loopantennas]" <loopantennas@yahoogroups.com>
> >Sent: Oct 3, 2016 2:04 PM
> >To: loopantennas@yahoogroups.com
> >Subject: Re: [loopantennas] Shielded loop question
> >
> >Thank Rick. That explain why a loop can be effective for different band.
> Anyway, I prefer tuned loop but for a shielded one. it's hard to find a
> site with a diagram and construction plans. Money, electronic and

> mechanical issue are not a problem. Just need a good "how to" site.
> > Danny
> >
>
> Chris Trask
> N7ZWY / WDX3HLB
> Senior Member IEEE
> http://www.home.earthlink.net/~christrask/
>
>

11575. Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 19:07:00 UTC
From: John Maxwell
Topic: 11575 Message: 11575

I'm about embark on my first attempt at winding a ferrite bar antenna (for a WWVB receiver). I understand the theory, and how it's all supposed to work, but that's where this antenna and I stop right now.

Does anyone have any practical tips that they feel will make my life easier?

Again, I don't need an explanation of how such an antenna is supposed to work in theory; I understand that reasonably well. I'm looking for war stories.

-John

--
John Maxwell KB3VLL jmax@...

"I'm going from desperately bleak to bright at a moment's notice. Gotta find that charger."
-Vvalkyri

11576. Re: [loopantennas] Shielded loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 19:03:46 UTC
From: Jordan Dobrikin
Topic: 11560 Message: 11576

https://www.youtube.com/watch?v=13D3gFWbswc

https://www.nonstopsystems.com/radio/frank_radio_antenna_magloop-small.htm

http://www.kr1st.com/swlloop.htm

http://www.btv.cz/en/mla-m

http://www.g4ilo.com/wonder-loop.html

https://www.yo3ggx.ro/magloop/PortableMagLoopBuild_v1.0.pdf

http://www.hard-core-dx.com/nordicdx/antenna/hidden/carploop.html

On Thu, Oct 6, 2016 at 11:44 AM, Jordan Dobrikin <jjdobrikin@...>
wrote:

> Hi
> 73 Jordan ve7jjd
>
> http://wiki.radioreference.com/index.php/Making_a_Receive_Loop_Antenna
>
> http://www.qsl.net/va3iul/Homebrew_RF_Circuit_Design_
> Ideas/Multi-Q_RX_Loop_Antenna.gif
>
> http://www.hard-core-dx.com/nordicdx/antenna/loop/hulaloop.html
>
> https://www.google.ca/search?q=ElectricallySmallResonantLoopF
> orMediumWave.pdf+&ie=utf-8&oe=utf-8&gws_rd=cr&ei=EUf1V5z1JZD8jwPx-rToCQ
>
> http://www.frontiernet.net/~jadale/My%20Loop%20Antennas.htm
>
> https://mail.google.com/mail/u/0/#inbox/1574e377ba5eca99
>
> file:///C:/Users/Jordan%20Dobrikin/Downloads/-AM%
> 20LOOP%20ANTENNAS%20(3).pdf
>
> https://www.google.ca/search?
>
> q=ElectricallySmallResonantLoopForMediumWave.pdf+&ie=utf-8&oe=
> utf-8&gws_rd=cr&ei=4x_1V_nOH5DCjwOwhYnABA
>
> http://www.randombio.com/loopantenna.html
>
> http://www.w8ji.com/noise.htm
>
> http://www.n6rk.com/loopantennas/NCJ_loop_antenna_N6RK.pdf

>
> http://www.lz1aq.signacor.com/docs/fa-eng/Weak_signals-mag_loop_engl.htm
>
>
> On Thu, Oct 6, 2016 at 7:14 AM, Chris Trask christrask@earthlink.net
> [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
>>
>>
>> Look in the group files section for the PDF document "Shielded Loop
>> Aerials Rev 0.pdf". I describe how to build a remotely tuned shielded loop
>> in that paper.
>>
>> -----Original Message-----
>> >From: "dannibou@... [loopantennas]" <loopantennas@yahoogroups.com>
>> >Sent: Oct 3, 2016 2:04 PM
>> >To: loopantennas@yahoogroups.com
>> >Subject: Re: [loopantennas] Shielded loop question
>> >
>> >Thank Rick. That explain why a loop can be effective for different band.
>> Anyway, I prefer tuned loop but for a shielded one. it's hard to find a
>> site with a diagram and construction plans. Money, electronic and
>> mechanical issue are not a problem. Just need a good "how to" site.
>> > Danny
>> >
>>
>> Chris Trask
>> N7ZWY / WDX3HLB
>> Senior Member IEEE
>> http://www.home.earthlink.net/~christrask/
>>
>>
>
>

11577. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 19:21:18 UTC
From: Jordan Dobrikin
Topic: 11575 Message: 11577

Hi

WWV is HF what frequency(s) are you Planning?

Litz wire and probably a long strong ferrite.

You might want to look into a Q Multiplier Loop to get the HF range(s)

73 Jordan ve7jjd

On Thu, Oct 6, 2016 at 12:07 PM, John Maxwell jmax@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> I'm about embark on my first attempt at winding a ferrite bar antenna
> (for a WWVB receiver). I understand the theory, and how it's all
> supposed to work, but that's where this antenna and I stop right now.
>
> Does anyone have any practical tips that they feel will make my life
> easier?
>
> Again, I don't need an explanation of how such an antenna is supposed to
> work in theory; I understand that reasonably well. I'm looking for war
> stories.
>
> -John
>
> --
> John Maxwell KB3VLL jmax@...
>
> "I'm going from desperately bleak to bright at a moment's
> notice. Gotta find that charger."
> -Vvalkyri
>
>

11578. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 19:52:31 UTC
From: John Maxwell
Topic: 11575 Message: 11578

On 10/06/2016 03:21:18 PM, Jordan Dobrikin jjdobrikin@...[loopantennas] wrote:
> Hi
>
> WWV is HF what frequency(s) are you Planning?
>

Yes. I'm after WWVB, which is down on 60 kHz. It's the signal that most
of the "atomic clocks" you can buy as consumer items sync themselves to.

-John

--
John Maxwell KB3VLL jmax@...

"Croissants stress me out."
-Dena

11579. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 20:05:16 UTC
From: gnuarm.2007@...
Topic: 11575 Message: 11579

WWVB is on 60 kHz and so is in the LF band, not HF.

There are a variety of potential antennas I found for this frequency range. A ferrite loopstick is just one type although very common because of its small size. While I have been looking at building a WWVB receiver myself, my requirements for the antenna don't allow the use of the ferrite loopstick. I need an antenna that gives as large an output signal as possible.

Do you know how strong the WWVB signal is in your area? Do you have any idea of the background noise level?

Are you building a conventional WWVB receiver using one of the many receiver front end chips and an MCU? If so, which receiver?

Regards,

Rick C.

---In loopantennas@yahoogroups.com, <jjdobrikin@...> wrote :

Hi

WWV is HF what frequency(s) are you Planning?

Litz wire and probably a long strong ferrite.

You might want to look into a Q Multiplier Loop to get the HF range(s)

73 Jordan ve7jjd

On Thu, Oct 6, 2016 at 12:07 PM, John Maxwell jmax@... mailto:jmax@... [loopantennas] <loopantennas@yahoogroups.com mailto:loopantennas@yahoogroups.com> wrote:
I'm about embark on my first attempt at winding a ferrite bar antenna
(for a WWVB receiver). I understand the theory, and how it's all
supposed to work, but that's where this antenna and I stop right now.

Does anyone have any practical tips that they feel will make my life
easier?

Again, I don't need an explanation of how such an antenna is supposed to
work in theory; I understand that reasonably well. I'm looking for war stories.

-John

--
John Maxwell KB3VLL jmax@... mailto:jmax@...

"I'm going from desperately bleak to bright at a moment's
notice. Gotta find that charger."

-Vvalkyri

11580. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 20:09:31 UTC
From: John Maxwell
Topic: 11575 Message: 11580

On 10/06/2016 03:52:31 PM, John Maxwell wrote:
> On 10/06/2016 03:21:18 PM, Jordan Dobrikin
> jjdobrikin@...[loopantennas] wrote:
> > Hi
> >
> > WWV is HF what frequency(s) are you Planning?
> >
>
> Yes. I'm after WWVB, which is down on 60 kHz. It's the signal that
> most
> of the "atomic clocks" you can buy as consumer items sync themselves
> to.
>

To amplify a little: It occurred to me that 60 kHz is will within the capability of almost any microcontroller to directly digitize.

I'm therefore playing around with hooking a minimal antenna and front end onto a suitable chip, and doing all the requisite signal processing as DSP on the chip.

Since the consumer devices I mentioned all use loopstick antennas, it seems like a reasonable starting point. I can, of course, fall back to a larger open-air loop if it proves necessary, but I want to try the bar antenna first.

Dunno how much will come of it, but it should be
fun trying.

-John

--
John Maxwell KB3VLL jmax@...

Nihilism is best done by professionals.
-Iggy Pop

11581. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 20:55:56 UTC
From: Jordan Dobrikin
Topic: 11575 Message: 11581

Hi
Try a Loran Antenna from ebay, 100 kilocycles.
73 Jordan ve7jjd

On Thu, Oct 6, 2016 at 1:09 PM, John Maxwell jmax@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> On 10/06/2016 03:52:31 PM, John Maxwell wrote:
> > On 10/06/2016 03:21:18 PM, Jordan Dobrikin
> > jjdobrikin@...[loopantennas] wrote:
> > > Hi
> > >
> > > WWV is HF what frequency(s) are you Planning?
> > >
> >
> > Yes. I'm after WWVB, which is down on 60 kHz. It's the signal that
> > most
> > of the "atomic clocks" you can buy as consumer items sync themselves
> > to.
> >
>
> To amplify a little: It occurred to me that 60 kHz is will within the
> capability of almost any microcontroller to directly digitize.
>
> I'm therefore playing around with hooking a minimal antenna and front
> end onto a suitable chip, and doing all the requisite signal processing
> as DSP on the chip.
>
> Since the consumer devices I mentioned all use loopstick antennas, it
> seems like a reasonable starting point. I can, of course, fall back to a
> larger open-air loop if it proves necessary, but I want to try the bar
> antenna first.
>
> Dunno how much will come of it, but it should be
> fun trying.
>
> -John
>
> --
> John Maxwell KB3VLL jmax@...
>
> Nihilism is best done by professionals.
> -Iggy Pop

>
>

11582. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 21:47:25 UTC
From: John Maxwell
Topic: 11575 Message: 11582

On 10/06/2016 04:05:16 PM, gnuarm.2007@... [loopantennas] wrote:
> WWVB is on 60 kHz and so is in the LF band, not HF.
>
> There are a variety of potential antennas I found for this frequency
> range. A ferrite loopstick is just one type although very common
> because of its small size.

Agreed. It's also where I want to start, because if I can make it work, it's a nice compact unit. Basically, the same reason anyone would want to use a loopstick.

> While I have been looking at building a
> WWVB receiver myself, my requirements for the antenna don't allow the
> use of the ferrite loopstick. I need an antenna that gives as large
> an output signal as possible.
>
> Do you know how strong the WWVB signal is in your area? Do you have
> any idea of the background noise level?
>
I'm in a crappy area for receiving it; east coast near Annapolis. I'm fully aware that there's a very good chance I won't be able to get enough signal out of a loopstick. I want to try, though. If it doesn't work, I'll go to a (much) larger air loop.

> Are you building a conventional WWVB receiver using one of the many
> receiver front end chips and an MCU? If so, which receiver?
>

It's an experiment in seeing what I can get a microcontroller and minimal front end to do. 60 kHz is well within the capabilities of most microcontrollers to directly digitize, and some of 'em have pretty respectable amounts of DSP capability. So I'm thinking a low-pass filter to keep AM out of it and do impedance matching between the antenna and ADC, and everything else in software.

It's a "Hmm. This ought to work; I wonder if I can make it." effort.

I'm an embedded software guy for a living, so this falls in the category of junk-box projects for me.

-John

--
John Maxwell KB3VLL jmax@...m

A: Because it messes up the order in which people normally read text.
Q: Why is it such a bad thing?

A: Top-posting.
Q: What is the most annoying thing on usenet and in e-mail?

11583. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 22:23:50 UTC
From: gnuarm.2007@...
Topic: 11575 Message: 11583

John,

That is essentially what I am doing. My goal is to receive the signal with the lowest possible power consumption. So I am working with a very low power FPGA.

I plan to use a LVDS differential input as a comparator to produce a binary input to the FPGA. I am working on a frequency locked loop that will give me a sample rate of 240 kHz, 4x the carrier which will save having to do multiplies in a synchronous amplification approach. By multiplying the incoming stream by a complex rotating vector at 60 kHz which is just (1,0) (0,1) (-1,0) (0,-1), the input will be shifted to zero hertz as a complex pair. As you can see this is just inversions and adds with no multiplies. The phase can easily be obtained from this information.

I plan to sum the signal for a period that will give sufficient resolution to detect the changes in phase in the signal. I expect this will either be 10 Hz or possibly 30 Hz which would be a good clock rate for an LCD display.

The 240 kHz VFO will not be stable long term and these devices typically only check the WWVB signal once a day. So a 32768 Hz oscillator will be used to run the clock itself and the 240 kHz (slaved to the WWVB signal) will be used to measure the frequency of the 32768 Hz clock so it can be trimmed digitally. I might use trimmer caps, but it will likely be easier to trim using an NCO.

To use the LVDS input with no amplifier will require a strong signal. I am east coast so the signal is marginal. To get the highest voltage possible, I was thinking of working with a larger non-ferrite loop. I've made a frame about 2 foot in diameter which will have 16 turns of RG-6 coax to make it a shielded loop. This will give a voltage of about 0.2 mV if I can keep the Q close to 100. The 18 gauge center conductor of the coax will do well if it is solid copper (most RG-6 coax is copper coated steel).

I have a board I build that can be programmed to produce the 60 kHz WWVB signal. So I can test when the signal is too weak to be received reliably.

I just read that you are near Annapolis. I am not far from there on the other side of DC. lol Maybe I'll connect my WWVB generator to the antenna and see if you can pick it up.... when I get it working.

So is the above anything like what you are thinking?

Rick C.

---In loopantennas@yahoogroups.com, <jmax@...> wrote :

To amplify a little: It occurred to me that 60 kHz is will within the capability of almost any microcontroller to directly digitize.

I'm therefore playing around with hooking a minimal antenna and front end onto a suitable chip, and doing all the requisite signal processing

as DSP on the chip.

Since the consumer devices I mentioned all use loopstick antennas, it seems like a reasonable starting point. I can, of course, fall back to a larger open-air loop if it proves necessary, but I want to try the bar antenna first.

Dunno how much will come of it, but it should be
fun trying.

-John

--
John Maxwell KB3VLL jmax@... mailto:jmax@...

Nihilism is best done by professionals.
-Iggy Pop

11584. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 22:48:00 UTC
From: John Maxwell
Topic: 11575 Message: 11584

On 10/06/2016 06:23:50 PM, gnuarm.2007@... [loopantennas] wrote:
> John,
>
> That is essentially what I am doing. My goal is to receive the signal
> with the lowest possible power consumption. So I am working with a
> very low power FPGA.
>
Most of the difference between what you're doing and what I am is right
there; I'm figuring on using one of Microchip's dsPIC controllers
(mostly because they look to be up to the job, and I've got a couple
dozen around; leftovers from old projects).

I get a 12-bit 500 kS ADC on that, so I'm thinking a low pass filter to
keep out AM, and roughly 8-9x oversampling.

I may need to add an amplifier stage between the LPF and the ADC, but
I've seen DSP pull some amazing things out of the mud, so maybe not too.
We'll see. I'll upgrade the antenna first.

Other than that, I get 70 MIPS and single-cycle multiply-accumulates, so
there's some good DSP horsepower there. The chips were
designed to do audio DSP, but 60 kHz is a small enough stretch that they
can still handle it.

The algorithm details are much as you describe, modulo being written in
assembly instead of VHDL and 12 bits vs. 1.

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onto WWVB; at that point, I'll see how far I can push the accuracy.

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> trimmer caps, but it will likely be easier to trim using an NCO.
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> reliably.
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11585. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-06 23:55:42 UTC
From: Jordan Dobrikin
Topic: 11575 Message: 11585

Hi
This a bit over the top, but I could not help myself.

However can someone explain what he means by contra series and contra parallel?
73 Jordan ve7jjd

https://www.youtube.com/watch?v=13D3gFWbswc
https://www.youtube.com/watch?v=DQqcCgNmGTw
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https://www.youtube.com/watch?v=jxm2LQAO5ic
https://www.youtube.com/watch?v=Nh_xZQYW4ns

https://www.youtube.com/watch?v=lDdDO_TC68M
https://www.youtube.com/watch?v=6MwlDelVf9s

On Thu, Oct 6, 2016 at 3:48 PM, John Maxwell jmax@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> On 10/06/2016 06:23:50 PM, gnuarm.2007@... [loopantennas] wrote:
> > John,
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> > That is essentially what I am doing. My goal is to receive the signal
> > with the lowest possible power consumption. So I am working with a
> > very low power FPGA.
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> Most of the difference between what you're doing and what I am is right
> there; I'm figuring on using one of Microchip's dsPIC controllers
> (mostly because they look to be up to the job, and I've got a couple
> dozen around; leftovers from old projects).
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> I get a 12-bit 500 kS ADC on that, so I'm thinking a low pass filter to
> keep out AM, and roughly 8-9x oversampling.
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> I may need to add an amplifier stage between the LPF and the ADC, but
> I've seen DSP pull some amazing things out of the mud, so maybe not too.
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11586. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 00:02:41 UTC
From: Everett Sharp
Topic: 11575 Message: 11586

Contra, is when each coil is wound in a different direction from the next to it. The reason for doing that is to reduce the interaction between the coils.

Sent from my iPad

> On Oct 6, 2016, at 6:55 PM, Jordan Dobrikin jjdobrikin@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
>
>
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> Hi
> This a bit over the top, but I could not help myself.
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> However can someone explain what he means by contra series and contra parallel?
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> https://www.youtube.com/watch?v=Nh_xZQYW4ns
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11587. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 00:08:22 UTC
From: gnuarm.2007@...
Topic: 11575 Message: 11587

The FPGA will have each portion running at the exact clock rate required for that portion (including zero when not used), so I will be able to keep the power to a minimum. Plus, this FPGA is designed for very low power consumption and should be up to the job. Otherwise, an MCU would do the same thing, just with a lot of instruction fetching to make it all happen.

Your sample rate will be about twice mine so that is good. If you sample at 240 kHz (synchronous to the WWVB carrier) you can eliminate the multiplies altogether and drop the multiply unit, lol. At 480 kHz you can get away with a multiply every other sample. But I'm sure you are not trying to minimize the power consumption.

The 12 bit ADC can do you a lot of good, if your signal is large enough to use more than 1 bit. As I said, I am shooting for 0.2 mV at the input and that requires careful attention to detail in the antenna design. I don't think you will get anywhere near this from a ferrite loopstick so a preamp will be required. I have a design for a very low power cascode circuit using BF862 FETs. The gain is in the 80 dB ball park while presenting a very high impedance and a low capacitance to the input. If needed this would be a great circuit to use keeping the Q of the antenna high.

Just to mention, ferrite loopsticks are used because they are small. They produce a very small signal, but because the noise is dominated by environmental noise, it is not important to have a great low noise front end. Instead any amplifier does the job well enough so the loopstick typically works fine. But it won't do without the preamp.

The two problems with a WWVB receiver without a preamp is signal strength and selectivity. If you don't use a preamp you will be working with the same 1 bit on the input that I will have (if you are lucky, even getting 1 bit requires some feedback to eliminate DC offset on the input). Your programming in the DSP will get you selectivity. A synchronous amp working over a long period is essentially a *very* narrow band pass filter and will help eliminate much interference.

Rick C.

---In loopantennas@yahoogroups.com, <jmax@...> wrote :

On 10/06/2016 06:23:50 PM, gnuarm.2007@... mailto:gnuarm.2007@... [loopantennas] wrote:
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11588. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 01:36:05 UTC
From: Jordan Dobrikin
Topic: 11575 Message: 11588

Hi
I am a bit mechanically dislexic but let's muddle on.

Starting a winding at the 6 o'clock position, going clockwise, when the first loop is complete in a same plane, spiral loop antenna, it is common to continue on clockwise for the 2nd loop and have a spacing of an inch or two between the the loops to get a 2nd loop a slightly shorter length (smaller Diameter) to reduce distributed capacitance in the loops.

Does contra series mean not to continue on clockwise but to make the next turn counter clockwise, and should one continue on with keeping the inch or two spacing, at the expense of reducing the Area of the Loop(s)?

Or does Contra Series eliminate the need for the inch or two spacing.

Same question(s) about a solenoid type of winding. Should there be spacing between each winding?

I think the above is all Contra Series so my next question is for a more detailed description of contra parallel

73 Jordan ve7jjd

On Thu, Oct 6, 2016 at 5:08 PM, gnuarm.2007@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

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11589. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 02:06:59 UTC
From: vk2tti@...
Topic: 11575 Message: 11589

G'day loopers. A ferrite loop antenna has little "aperture". A loop antenna is constructed with a large diametre to give it "aperture". You can increase a ferrire loops aperture by using a long ferrite rod. Ihave butt glued two rods together and carefully rolled a collar of notepaper and araldite around the joint to strengthen it (essential). Or you can use the two rods coaxicaly and seperated by say 12 inches, wind coils over each rod and connect them so that they oppose or abet each other. As an experiment. I have made both types. The set up with the separated rods possess the deepest nulls I have ever seen in loop antennas. Happy looping VK2TTI

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
Thu, 6 Oct 2016 18:36:05 -0700
Subject:
Re: [loopantennas] Ferrite bar antenna

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73 Jordan ve7jjd

On Thu, Oct 6, 2016 at 5:08 PM, gnuarm.2007@...m [1] [loopantennas] <loopantennas@yahoogroups.com [2]> wrote:

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The 12 bit ADC can do you a lot of good, if your signal is large enough to use more than 1 bit. As I said, I am shooting for 0.2 mV at the input and that requires careful attention to detail in the antenna design. I don't think you will get anywhere near this from a ferrite loopstick so a preamp will be required. I have a design for a very low power cascode circuit using BF862 FETs. The gain is in the 80 dB ball park while presenting a very high impedance and a low capacitance to the input. If needed this would be a great circuit to use keeping the Q of the antenna high.

Just to mention, ferrite loopsticks are used because they are small. They produce a very small signal, but because the noise is dominated by environmental noise, it is not important to have a great low noise front end. Instead any amplifier does the job well enough so the loopstick typically works fine. But it won't do without the preamp.

The two problems with a WWVB receiver without a preamp is signal strength and selectivity. If you don't use a preamp you will be working with the same 1 bit on the input that I will have (if you are lucky, even getting 1 bit requires some feedback to eliminate DC offset on the input). Your programming in the DSP will get you selectivity. A synchronous amp working over a long period is essentially a *very* narrow band pass filter and will help eliminate much interference.

Rick C.

---In loopantennas@yahoogroups.com [3], <jmax@...> wrote :

On 10/06/2016 06:23:50 PM, gnuarm.2007@... [4] [loopantennas] wrote:

> John,
>
> That is essentially what I am doing. My goal is to receive the signal
> with the lowest possible power consumption. So I am working with a

> very low power FPGA.
>

Most of the difference between what you're doing and what I am is right
there; I'm figuring on using one of Microchip's dsPIC controllers
(mostly because they look to be up to the job, and I've got a couple
dozen around; leftovers from old projects).

I get a 12-bit 500 kS ADC on that, so I'm thinking a low pass filter to
keep out AM, and roughly 8-9x oversampling.

I may need to add an amplifier stage between the LPF and the ADC, but
I've seen DSP pull some amazing things out of the mud, so maybe not too.
We'll see. I'll upgrade the antenna first.

Other than that, I get 70 MIPS and single-cycle multiply-accumulates, so
there's some good DSP horsepower there. The chips were
designed to do audio DSP, but 60 kHz is a small enough stretch that they
can still handle it.

The algorithm details are much as you describe, modulo being written in
assembly instead of VHDL and 12 bits vs. 1.

The uC clock itself should give me enough stability to eventually lock
onto WWVB; at that point, I'll see how far I can push the accuracy.

--
John Maxwell KB3VLL jmax@... [5]

The best book on programming for the layman is "Alice in Wonderland";
but that's because it's the best book on anything for the layman.

Email sent using Optus Webmail

Links:
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[1] mailto:gnuarm.2007@...
[2] mailto:loopantennas@yahoogroups.com
[3] mailto:loopantennas@yahoogroups.com
[4] mailto:gnuarm.2007@...
[5] mailto:jmax@...
[6]
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[19] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[20]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
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11590. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 03:20:26 UTC
From: Andy ZL3AG
Topic: 11575 Message: 11590

The best EVER loop I have ever used for broadcast band reception was the G.S. Maynard designed "Q Multiplier and Spiral Loop Antenna" as described in the March 1981 issue of the British magazine "Practical Wireless".

I built one using just normal "hookup" wire, with hinges on the 7 wooden arms so it would fold up (like an umbrella) and I used to go mobile DXing all over New Zealand in my race/road 1220cc '73 Mini with that antenna stored across the back seat of the car, and a Racal RA17L receiver strapped into the front passenger seat with the full racing harness.

The tuning was so sharp you could peak it on either sideband of an AM broadcast signal and you could actually hear the audio peak move around in frequency as you carefully tuned it across the signal - the tuning capacitor needed multiple 10:1 (??) drives on it to do this.

If you could build one for 60kHz, you'd be onto a winner.

Cheers,

Andy

11591. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 04:17:52 UTC
From: John Maxwell
Topic: 11575 Message: 11591

On 10/06/2016 08:08:22 PM, gnuarm.2007@... [loopantennas] wrote:
[snip]
> The two problems with a WWVB receiver without a preamp is signal
> strength and selectivity. If you don't use a preamp you will be
> working with the same 1 bit on the input that I will have (if you are
> lucky, even getting 1 bit requires some feedback to eliminate DC
> offset on the input). Your programming in the DSP will get you
> selectivity. A synchronous amp working over a long period is
> essentially a *very* narrow band pass filter and will help eliminate
> much interference.
>

Agreed on all counts (especially the 1-bit part). I'm also hoping (haven't done the detailed analysis yet) that I can use the headroom that 12 bits and 8x oversampling gives me to do the DC offset in software as well. So, I'd get the same 1-bit resolution as you, but it might still be enough.

If not, because I'm not particularly interested in power consumption, a low voltage op-amp stage or two will be the first preamp I'll try, but I'll probably try a big loop before that.

The Q-multiplier that Andy ZL3AG suggests is an idea I haven't considered; have to think about that. Thanks, Andy.

-John

--
John Maxwell KB3VLL jmax@...

"Security is mostly a superstition. It does not exist in nature, nor do the children of man experience it as a whole. Avoiding danger is no safer in the long run than outright exposure. Life is either a daring adventure or it is nothing."
- Helen Keller

11592. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 04:43:34 UTC
From: Andy ZL3AG
Topic: 11575 Message: 11592

On 7/10/2016, at 5:17 PM, John Maxwell jmax@... [loopantennas] wrote:

> The Q-multiplier that Andy ZL3AG suggests is an idea I haven't
> considered; have to think about that. Thanks, Andy.
>

My pleasure. I've guessing the WWVH signal is fairly low bandwidth. :^)

11593. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 06:10:51 UTC
From: gnuarm.2007@...
Topic: 11575 Message: 11593

I'm not familiar with a Q-multiplier. I can't say how much that will help. But it sounds like a very high Q filter. That is what your DSP calculations will do. So the Q-multiplier may be redundant.

The 1 bit signal using a 12 bit ADC means the signal is not large enough to span a full bit. If you don't provide some means of offsetting the DC point before the ADC input the signal won't cross any thresholds in the ADC and you will get a constant reading. Another way to make that work is to provide a dithering signal that adds in an aperiodic offset that is enough to get the signal to change the ADC sample value. The amount of the offset is different for each sample and so some values will cause the threshold to be crossed, but others won't. Because the dither is aperiodic the energy is spread over the spectrum and is filtered out easily.

The way I am doing it is to feedback the the inverse of the value measured through a low pass filter and summed into the input. This will result in the signal to be high half the time and low half the time, meaning the average input will be perched right on the threshold compensating for any DC offset in the input.

If you use a larger loop, it will need to be pretty large. The loop I have analyzed (2 foot diameter, 16 turns, 18 gauge conductor) will give a signal that is less than one bit of your 12 bit converter assuming it uses a 3.3 volt reference. A much larger signal would be better in your case. I believe the signal strength formula is linear with number of turns, but proportional to the area of the loop (diameter squared). So for a given length of wire (and resistance which impacts the Q), your best bet is one large loop. I have 100 feet of coax which I might first try as one huge loop if I can hang it in my living room cathedral ceiling. That will give a 4 times larger signal as 16 turns on a 2 foot frame. It won't be very round so the nulls won't be very good, but it can't be steered anyway, so the nulls aren't likely to be much use anyhow. lol

Rick C.

---In loopantennas@yahoogroups.com, <jmax@...> wrote :

On 10/06/2016 08:08:22 PM, gnuarm.2007@... mailto:gnuarm.2007@... [loopantennas] wrote:
[snip]
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> strength and selectivity. If you don't use a preamp you will be
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> offset on the input). Your programming in the DSP will get you
> selectivity. A synchronous amp working over a long period is
> essentially a *very* narrow band pass filter and will help eliminate
> much interference.
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(haven't done the detailed analysis yet) that I can use the headroom

that 12 bits and 8x oversampling gives me to do the DC offset in software as well. So, I'd get the same 1-bit resolution as you, but it might still be enough.

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-John

--
John Maxwell KB3VLL jmax@... mailto:jmax@...

"Security is mostly a superstition. It does not exist in nature, nor do the children of man experience it as a whole. Avoiding danger is no safer in the long run than outright exposure. Life is either a daring adventure or it is nothing."
- Helen Keller

11594. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 06:35:55 UTC
From: John Maxwell
Topic: 11575 Message: 11594

On 10/07/2016 02:10:51 AM, gnuarm.2007@... [loopantennas] wrote:
> I'm not familiar with a Q-multiplier. I can't say how much that will
> help. But it sounds like a very high Q filter. That is what your DSP
> calculations will do. So the Q-multiplier may be redundant.
>

Yes it is; it's essentially an active tuned circuit involving the antenna as an inductive element. Like tuning your loop, but with active components (I'm going to guess a FET would be best, but am working off very old memories about Q-multipliers) involved too. The advantage, for this application, would be quite a bit of selectivity at the very front end.

> The 1 bit signal using a 12 bit ADC means the signal is not large
> enough to span a full bit. If you don't provide some means of
> offsetting the DC point before the ADC input the signal won't cross
> any thresholds in the ADC and you will get a constant reading.
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> adds in an aperiodic offset that is enough to get the signal to change
> the ADC sample value. The amount of the offset is different for each
> sample and so some values will cause the threshold to be crossed, but
> others won't. Because the dither is aperiodic the energy is spread
> over the spectrum and is filtered out easily.
>

Yes, I know the theory of sub-bit noise sampling.

I'll start by hoping I can get enough natural noise; if not, a high-speed digital noise source from one output line run through a low-pass filter/attenuator should do the job.

I need a minimum 800 uV of noise out to 480 kHz (or 240), so a few RC stages hung off of an SPI port clocked at 10-15 MHz and fed with random data should make a decent enough noise source if necessary.

-John

--
John Maxwell KB3VLL jmax@jmaxhome.com

"I am not a Church numeral; I am a free variable!"

11595. Re: [loopantennas] Ferrite bar antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-07 09:01:38 UTC
From: vk2tti@...
Topic: 11575 Message: 11595

G'day all again. A Q multiplier, essentialy an active device that introduces a suitable amount of positive feedback, lke the old regenerative recivers. Too much feedback and the system goes into oscilation (spelling ugh). Careful design is required. Regards again VK2TTI

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
Fri, 07 Oct 2016 02:35:55 -0400
Subject:
Re: [loopantennas] Ferrite bar antenna

On 10/07/2016 02:10:51 AM, gnuarm.2007@... [loopantennas] wrote:
> I'm not familiar with a Q-multiplier. I can't say how much that will
> help. But it sounds like a very high Q filter. That is what your DSP
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> The 1 bit signal using a 12 bit ADC means the signal is not large
> enough to span a full bit. If you don't provide some means of
> offsetting the DC point before the ADC input the signal won't cross
> any thresholds in the ADC and you will get a constant reading.
> Another way to make that work is to provide a dithering signal that
> adds in an aperiodic offset that is enough to get the signal to change

> the ADC sample value. The amount of the offset is different for
each
> sample and so some values will cause the threshold to be crossed,
but
> others won't. Because the dither is aperiodic the energy is spread
> over the spectrum and is filtered out easily.
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low-pass filter/attenuator should do the job.

I need a minimum 800 uV of noise out to 480 kHz (or 240), so a few RC
stages hung off of an SPI port clocked at 10-15 MHz and fed with
random
data should make a decent enough noise source if necessary.

-John

--
John Maxwell KB3VLL jmax@...

"I am not a Church numeral; I am a free variable!"

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[2]
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[6] https://yho.com/1wwmgg
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11596. Loop Article First Draft

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-12 05:36:02 UTC
From: jjdobrikin@...
Topic: 11596 Message: 11596

Hi
FYI and a request for comment(s) and constructive criticism
73 Jordan ve7jjd

New Spell checked

Small Wideband Magnetic Loops
Hi
A first cut to answer the following question(s).
[shortwave-radio] I am in a 14th story high apartment 38 North -77 West with no balcony just one window facing 55 degrees NE 120 ft elevation I would like ideas for a stealth antennas or for websites to guide me for options for frequencies 0 kHz through 2 MHz for the SDRPlay.
James Campbell cmpbll_jms@yahoo.com [shortwave-radio] <shortwave- radio@yahoogroups.com>

I have been doing a lot of researching and reading for antennas for similar requirements of a Senior Citizens SWL/Scanner Club in a 19 story Assisted Living apartment building with a listening station in the 19th floor Lounge, as well as for individual Members on some lower floor balcony. Mine being on the 8th floor.
Several things come immediately to mind:
a) There is no such thing as a single design "super dooper" antenna for all frequencies!
b) All antennas are some form of a tuned circuit, resonant at one or more frequencies, primary and it's harmonics.
c) The laws of physics/science are the same for both transmitting and receiving; with transmitting calling for more robust components to handle large amounts of power.
At this time I will point out that I will be quoting and paraphrasing from many sources with little or no referencing to same.
In Gordon Darlings article on the Sony ICF 2010 he refers to not presenting a receivers front end to raw signal from DC to Multi Giga Cycles/Herz, noise and signal combined. He recommend some form of bandpass filtering, a Tuned Antenna and/or an Antenna Tuner.
This article will break down receiving requirements into three areas in conjunction with the three basic Bands covered by conventual multi band receivers.
Shortwave HF 1700 KHz to 30 Mhz
MW/LW 60 Hz to 1700 KHz
Scanners VHF/UHF 30 MHz to Multi GigaHz.
VHF/UHF wideband Antennas are small enough to place in/near a window or hang a couple of feet outside a/the window. Thus this all that I will present at this time. Take a look at the Base Scanner Antenna Radio Shack 20-014 NOS in BOX Police All Band Antenna to hang out the window.
For the remaining I will break things down to Passive vs Active.
Most SWL hobbyists receivers have two internal/external antennas; a "Long Wire" telescoping Whip and and an internal ferrite Coil.
External Antennas are made to replace and/or to compliment these antennas.
Passive Antennas
a) An untuned Long Wire, clipped or inductively coupled, to the Whip or bypassing the Whip via an external antenna Jack. Wire on a reel: Sangean ANT 60, Sony Compact AN 61, Redsun

RA-100, Tecsun AN-06, RADIO SHACK SHORTWAVE ANTENNA MODEL 278-1374A
b) A Small Wideband Magnetic Loop tuned or untuned, inductively coupled to the receivers internal loop and sometimes to the receivers external antenna jack. Here I am thinking about store bought Loops like: Select A Tenna; Tecsun AN-200 AM/MW Rotatable Tunable Loop
c) A Long Wire dropped over the window/balcony with Balun mounted just outside the window sill, with coax low noise pickup to the the receiver system, in this case an Antenna Tuner being considered as part of the Receiver System. This to get the antenna out of the noise fields of the interior of the apartment/building.
d) More complicated is expanding on b) above with a custom build loop commensurate with your construction skills, operating/listening procedure(s) and esthetics taste(s), from one of hundreds of Loops described in/on the Internet. The problem here is that there is precious little specific designs for LW and HF.
However For LW use MW designs with more turns, (and possibly more capacitance in the variable capacitor) a longer length of wire. One can have less distance seperating each turn which increases the distributed capacitance which in the LW case is benifical. A solenoid wind is probably better/easier than a spiral wind where each turn is smaller thus reducing the overall area of the loop. The longer wire adds to the overall mass and the use Litz as opposed to speaker wire/zip cord should be considered.
Rules of thumb for Loop construction are as follows:
a) length of wire one tenth of full wave length keep the antenna to act as a loop
b) Large overall Area
c) Low inductance loop
d) Circular better than octagon better than triangular better square better than rectangular
e) Spiral better than Solenoid (side by side)
f) Space between windings to minimize distributed capacitance
Generally a tunable, rotatable loop, adjacent to the receiver. However look towards a Loop at/in the window and a remote tuning mechanism adjacent to the receiver.
It is here that I can point out some unique solutions such as the remotely tuned Carpet Loop, and a remotely tuned Loop in/on the window or on wall space between the vertical steel support columns, (every little bit counts).
One should seriously consider building/buying several antennas and a switching/combining system so one can easily switch to the antenna performing the best with actual conditions of the moment. This will also apply to the more complex active antennas as well.

The use of Transmitter grade Coax Switches and Coax to whatever Adapters is a tad expensive but easy to implement. DIY with parts (no shielding or impedance matching) from Radio Shack would suffice. On EBAY you can find assembeled circuit boards for Antenna Switching and Antenna Combining.
---
http://www.ebay.com/itm/162168680440?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT 1-400Mhz or 1-30Mhz (HF) 4 Way Antenna Splitter for RX with RF amp. Very useful device for RX antenna splitting between 4 different receivers with more gain. This Seller also made me a non amplfied reverse Board 4 different antennas to one receiver.
---
http://www.ebay.ca/itm/KIT-4-position-antenna-switch-/252339909226?hash=item3ac0a1726a:g:cTAAAOSwnTJW~kw1 KIT 4 position antenna switch
---
See further below for a passive HF Small Single Turn Magnetic Loop Antenna

http://www.kr1st.com/swlloop.htm

Active Antennas MW/LW
Glorified Whip/Longwire
Combined Whip & Tuning Amplifier, adjacent to the receiver; better yet a remotely tuned Antenna element in/on the window with Tuning element adjacent to the receiver. There are several commercially available as well as DIY Kits. The problem here is that although they act as a bandpass filter they amplify the noise as well as the signal in the band passed on to the receiver.
http://www.universal-radio.com/catalog/sw_ant/2206.html The Sony AN-1 active antenna provides good reception over the range 150 kHz to 30 MHz (longwave, medium wave and shortwave). The outdoor antenna amplifier module with 59 inch (1.5 meter) telescopic whip can be connected anywhere outdoors or even inside a window or attic. The Sony AN-1 includes 39 foot (12 meters) coaxial feed-line which connects to the compact control box. Output from the control box is a mini jack. Two output cables are supplied: one to alligator plugs and one to a mini plug. The AN-1 can even be used to enhance long wave or medium reception on radios that do not have an external jack. Just place the supplied ANC2 antenna module behind your portable radio to inductively transfer the radio signal into your radio's built-in antenna.
Indoor adjacent to the receiver include the following: MFJ 1020; MFJ 1024; Stoner Dymek DA 106D; Palstar AA 30;
It is here that one should start exploring the use of Antenna Noise Canceller such as the MFJ-1026 and Timewave ANC-4.
Small Amplified Loops
Basically the same overall construction/design of passive loops but adding a wide band, low noise amplifier in the tuning and lead-in subsystem.
a) At the remote Antenna with remote Varicap tuning adjacent to the receiver
b) At the Remote Antenna with no varying of the resonating capacitance
c) Adjacent to the receiver with variable capacitance
d) Adjacent to the receiver with no varying of the resonating capacitance
---
Commercial Loop antennas are the:
Sony ANLP-1; C.Crane Twin Coil Ferrite AM Antenna;
KESTREL-DEGEN-DE-31MS-MW-SW- Active Loop Receive Antenna;
Mini-Whip HF, VLF active antenna, 10kHz to 30MHz
http://www.ebay.com/itm/Mini-Whip-HF-VLF-active-antenna-10kHz-to-30MHz-/201539443391

SWL HF Loop extracted from http://www.kr1st.com/swlloop.htm
A Magnetic Loop Antenna for Shortwave Listening (SWL)
Now that were on the downward slope of sunspot cycle 23 (2004) you may have noticed that some of your favorite broadcast stations don't come in as strong as they did a few years ago. This is especially apparent on weaker DX stations. The whip on your shortwave receiver used to be sufficient to pull in some good DX, but now you find yourself looking for something better.
Maybe you have been thinking, or even have already tried, putting up a wire antenna. This may be a great solution if you live in a reasonably quiet area, noise wise, and your shortwave receiver doesnt easily overload in the presence of strong signals. Perhaps you live in an apartment or are situated where installing a wire antenna is simply not

feasible. Or maybe you are looking for something that offers a bit more mobility so you can take it into different rooms of your house. Consider the small single turn magnetic loop antenna if any of the above situations apply to you.

Small Single Turn Magnetic Loop (SSTML)

The small single turn magnetic loop (SSTML) antenna consists of a single winding inductor, about 3 feet (1 meter) in diameter, and a tuning capacitor. A second loop, which is one fifth of the diameter of the large loop, is connected to the feedline and this small loop is positioned in the large loop on the opposite side of the tuning capacitor.

Magnetic Loop Antenna

The SSTML has some very interesting properties:

a) It has a small footprint. The loop I describe here looks like a circle in the Vertical plane and is just a little over 3 feet (1 meter) in diameter.

b) It is a rather quiet antenna. It doesnt pick up as much man-made noise from nearby sources as a wire antenna would in the same situation.

c) This antenna is somewhat directional, which can benefit you in two ways. You can either aim (rotate) the antenna for maximum signal strength, or for minimum noise pickup. I prefer to do the latter, and heres why. This antenna has what is called a deep null on each side of the antenna, the broad sides, meaning that signals coming from that direction will be attenuated quite a bit (30 dB is an often-quoted figure). However, this is mostly true for signals we receive directly, like noise sources, and not so much for signals from broadcast stations coming to us through skywave propagation. I aim the antenna for minimum noise pickup, which results in the best signal to noise ratio. In some situations it is quite possible to fully tune out a noise source such as a TV or computer monitor.

d) Since this antenna is really a tuned circuit, it also acts as a preselector. It only receives well in a narrow bandwidth of a few hundred kilohertz (kHz). The antenna requires retuning if you change the frequency on the radio by a hundred to two hundred kHz. This may sound like a disadvantage, but if you have ever tried a long wire antenna on a rather sensitive receiver, you probably have noticed that your receiver may get overloaded, resulting in hearing multiple stations at once or hearing broadcast stations on frequencies where there really arent any. This may make it impossible for you to pull in that DX station youre really interested in or even make listening to a strong broadcast station rather unpleasant. This antenna will help prevent overloading your receiver.

When you search the World Wide Web for magnetic loops, you usually run into magnetic loops meant for transmission in the upper ham bands, perhaps 14 MHz and above. To be able to transmit on these loops youll have to follow stringent design rules in order to maximize the efficiency of the loop. If youre interested in a receive-only loop, then the design rules become very relaxed. Theres no need for large diameter tubing and neither for a low loss capacitor to successfully build a loop antenna. On this page I will present a description of my SWL loop.

Main Loop

I built the main loop of my SSTML from quarter-inch diameter soft copper tubing. Its rather flexible and keeps its shape nicely after being formed into a circle. Other conductors /wire can be used. The aim is to have low inductance, maximum surface area of the conductor(s), large area, and low distributed capacitance, to establish a high self resonant loop in the 20+ MHz range and a large variable capacitor to bring the resonant frequency down. Litz wire, Flexweave and low gague speaker/zipcord will all work well.

Capacitor Tuning

A multi stepped variable capacitance preferably remotely controlled to increase capacitance/tune the loop. A multi section variable tuning capacitor is the one most commonly used however switching in a bank of fixed capacitors is also effective.

When the loop is constructed and tuning capacitance set to minimum you can test for maximum

useable frequency. You can test it by holding the whip antenna of your shortwave receiver very close to the upper half of the loop and tune the receiver slowly in the 15MHZ to 20MHZ to find a noise peak coming from your receiver, and perhaps you’ll even be able to hear the WWV station. There will definitely be a peak in the noise, when tuning through the resonant frequency and past that the noise will decrease again.

Coupling

The next step is to build the coupling loop that will pick up the energy generated in the main loop and offer it to the receiver.

When you look at the many designs of magnetic loops on the internet, or in various other publications, youll notice that there are different ways to construct coupling loops. Some dont even use a loop, but a gamma match to connect the magnetic loop to the feedline. However, this would require another variable capacitor. Other designs use a coupling loop built from coax cable, and the center conductor and braid have to be connected in a certain way to minimize noise pickup. Ive (kr1st) experimented quite a bit with different types of coupling loops, including complex ones built from 4 pieces of coax, but I noticed no difference in performance compared to the simple wire loop. So lets keep this simple.

I constructed the coupling loop from solid #14 house wire. The size of the wire is not critical at all, just pick a size of whatever you have laying around that will keep its shape once mounted. The length of the wire should be about 2 feet if the circumference of the main loop is 10 feet. In other words the length of the wire for the coupling loop is one fifth of that of the main loop.

Construction of a Coupling Loop

Bend the wire in the shape of a circle and solder one end to the center conductor of the feedline (coax) and the other end to the braid. Use some electrical tape or shrink tubing to cover the exposed parts. On the other end of the coax you can attach a connector that will fit into your receivers external antenna jack. One of my favorite receivers, a Radioshack DX-398, uses a 3.5 mm phone jack that is easily obtainable at Radioshack. Solder the center conductor to the tip of the plug and the braid to the sleeve. Check the manual of your receiver to find out what the correct plug is and how the coax needs to be connected.

Once the coupling loop is completed you can attach it to the support frame pipe with a few wire ties. The coupling loop needs to be mounted on the opposite side of the tuning capacitor, which is the bottom of the main loop.

Feedline

The feedline of choice is coax for this antenna. This is mainly a choice of convenience, as you can route coax much more easily than balanced feedlines. Which type of coax, or the length, doesnt matter. You can use RG-58, but if you have only TV coax (RG-59, RG-6) available, then that will work just fine. Use whatever you have.

The Completed Magnetic Loop

You can test the loop by connecting it to your receiver and trying to determine the upper and lower tuning limits.

First, make sure all trimmers on the tuning capacitor are open.

To find the lower limit, connect a receiver to the loop and set capacitance tominimum. Turn the receiver on and tune it up through 5 MHz. If you can select a step size on your receiver, select 5 kHz, and make sure the receiver is in the AM mode. In case the receiver has different filter settings, choose the widest filter available. Now tune the receiver up in frequency and listen to the noise level. At some point you will notice that the noise increases. Write down where you think the noise is at a maximum. On my loop that is around 5.3 MHz.

Now, to find the upper limit, tune the receiver to 25 MHz and tune the receiver down in frequency in 5 kHz steps and write down where you find the noise to be at a maximum. At

23.2 MHz I found the maximum noise on my loop.
You now know the tuning range of your loop. My loop tunes from the 49 meter band all the way up to the 13 meter broadcast band. This includes the 40, 30, 20,17 and 15 meter amateur radio bands. Your loop may have somewhat different values for the lower and upper limits depending on the range of your tuning capacitor.
Fine Tuning (optional)
The loop will probably cover all the shortwave bands youre interested in without any fine tuning. However, if you find that the loop does not cover a band you want near the upper or lower tuning limit, it may be possible to add that band with some fine tuning. Keep in mind that if you raise the upper tuning limit, you will also raise the lower tuning limit and vice versa. Changing the tuning range of this loop antenna is like moving a sliding window over the shortwave bands. If youd like to raise the upper limit, youll have to lower the minimum value of the variable tuning capacitor.
You can lower the lower limit somewhat by using the trimmers on the variable capacitors . First tune the receiver to the lower limit you found earlier. Now close the trimmers with a screwdriver. This will add about 20 pF (pico-Farad) per gang/section to the total capacitor value. Not much, but it may be just enough. After you closed the first trimmer, tune the receiver down in frequency and find the new lower limit (tune for maximum noise). If thats not enough, close another trimmer and find the new lower limit. Hopefully that will bring the lower limit to where it needs to be. Keep in mind that the loop will probably not tune much lower than 5 MHz. Also remember that by lowering the lower limit you also lower the upper limit. This may mean that though you gain one band at the lower end, you may lose two or three bands at the upper end. Youll have to decide which is most beneficial to you. Since were on the downward slope of the sunspot cycle (2004), it may be more beneficial to lower the lower limit than raise the upper limit of the loop.
Of course you can try all kinds of combinations of closing trimmers and/or disconnecting capacitors. This will give you a wide variety of ranges, but can easily drive you crazy. Try to remember the sliding window principle. Adding capacity (i.e. closing the trimmers) will lower the lower and upper limits. Reducing capacity (i.e. disconnecting a capacitor) will raise the lower and upper limits.
Results
So how good is this loop, anyway? Compared to the built-in whip antenna, it may very well be the difference between copying a signal comfortably or not hearing it at all. Consider the following recording:
Choose Sample Recording (MP3 200kB) or Sample Recording (WAV 1.4Mb)
This is a 12 second recording of a part of a conversation (QSO) between amateur radio operators in the 20 meter band (14 MHz.). The receiver is a DX-398 portable. The loop was positioned right next to the receiver. For the first 4 seconds I used the loop antenna. Then I switched to the whip antenna for the next 5 seconds, and then switched back to the loop. As you can hear, the difference is dramatic. The signal is virtually inaudible on the whip, but very clear on the loop.
You can see an example of how well it can reduce noise from nearby noise sources on my random wire vs. magnetic loop page. I compared a random wire antenna strung throughout an apartment to a magnetic loop antenna. Even though the loop used in that example was built also for transmitting, the results are the same when it comes to receiving. By pointing the broadside of the loop at an offending noise source, like a TV or computer monitor, the noise can be effectively reduced.
You may notice that due to the pre-selecting properties of the magnetic loop your receiver will be less likely to overload, especially compared to a random wire antenna. This will greatly enhance the enjoyment of shortwave listening on a sensitive receiver.
Conclusion

It does take some time and effort to build this loop, but Im confident youll be pleased with the results. This loop took me about an afternoon to built, not including the tripod. Sure, stringing up a random wire antenna is a whole lot easier and quicker, but the results can be far less than desirable, especially in a noisy apartment setting.

It may sound somewhat complicated to build this antenna, especially the tuning section, but it really isnt. In fact you dont have to go through the tuning procedure at all. Chances are that even without fine tuning the antenna already covers all the bands youre interested in. Its a fun antenna to build and it gives you a greater sense of accomplishment than just stringing up a random wire. Youre actually building an antenna.

I hope youll enjoy your loop as much as I enjoy mine. Dont let the declining number of sunspots keep you from enjoying your favorite shortwave radio show. If you have any questions or suggestions, please do not hesitate to drop me an email.

73, Alex, KR1ST copyright © 2008 KR1ST

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11597. Receiving/Receiver Accessories

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-12 22:03:23 UTC
From: jjdobrikin@...
Topic: 11597 Message: 11597

Hi
This taken from my use at Sony ICF 2010 Yahoo Group.
Now submitted to this Group.
Thanks
73 Jordan ve7jjdb

Hi

I have been surfing the Files and Photos and found in Photos some Loop antennas homemade and commercial as well as some interesting stands to position the radio for easier use.

This leads me to a general question, what accessories are being used, or have been used, and how effective are/were they??

I am thinking past small commercial loops active and or passive. Although i am interested in the C.Crane Twin Loop.

I am very interested in the use of the big expensive commercial loops.

Other accessories include:
Antenna Tuners
Preselectors
Noise and Interference Reducers (RF)
Active Antennas: Whip
Artificial Ground
Speech Enhancer

Thanks
73 Jordan ve7jjd

11598. For Sale are 2 each 7.5" X 7.5" FSL antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-14 12:30:23 UTC
From: everettsharp@...
Topic: 11598 Message: 11598
Attachments: 2 described; binary payloads are missing from this source WARC

I have for sale 2 each 7.5" X 7.5" FSL antennas. The FSLs were wound in a 2 coil Polydorff configuration. The 2 windings were wound with 660/46 Litz wire and the variable capacitors are the high Q, 2 gang, Russian units, with a 3:1 turning ratio. I added a band switch so the second gang can be switched in for extended band coverage. Both FSL are mounted on a Lazy Susan base.

Band (1) tunes from 2,000 to 420 KHz and Band (2) tunes from 575 to 275 KHz. The tuning is sharp and the rotational nulls are quite sharp. Both FSLs are setup for induction coupling only.

I am asking $375 each, plus what ever the shipping cost would. Below is a pictures of one of the FSLs. If interested please contact me off list everettsharp@....

I have built and sold several FSLs, however, these two will be the last I build for sale, as I have used up all of the ferrite I had on hand to build them and most of the sources of supply for the Russian ferrite bars have dried up. Each of the FSLs have around $150 in material cost and about 20 hours work each. These are one of a kind and can not be bought anywhere else.

Everett N4CY

I have for sale a 7.5" X 7.5" FSL, it is wound a 2 coil Polydorff configuration. The 2 windings were wound with 660/46 Litz wire and the variable capacitor is one of the high Q, 2 gang, Russian units. I added a band switch so the second gang can be switched in for extended band coverage. The FSL is mounted on a Lazy Susan base.

Band (1) tunes from 2,000 to 420 KHz and Band (2) tunes from 575 to 275 KHz. The tuning is sharp and the rotational nulls are quite sharp. The FSL is setup for induction coupling only.

I am asking $375, plus what ever the shipping cost would. Below are pictures of the FSL. If interested please contact me off list everettsharp@....

Everett N4CY

11599. Artificial Grounds???

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-15 05:54:56 UTC
From: jjdobrikin@...
Topic: 11599 Message: 11599

Hi

Bottom line.

I am looking for information and/or advice on using Artificial Grounds for receive only SWLing in conventional concrete and steel buildings

Thanks
73 Jordan ve7jjd

11600. Re: Artificial Grounds???

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-15 10:53:34 UTC
From: kthkit@...
Topic: 11599 Message: 11600

Problem.
In modern building and houses it is difficult to set up and antenne for Hams specially indoors.
If a balcony can be used than there are more options bud indoors is a challenge.
You can experiment with the active capacitive whip and ferrite rod antennes to find the best compromise. Every indoor situation is different try it what is the best.
Want to receive the spectrum from 100 KHz up to 30 MHz and listen the SW broadcast stations.
My focus was to have an active indoor WB antenne and homemade. Some results and thoughts.
Experiments are done with the active capacitive antenne and the ferrite loops.

Capacitive mini whip antenne.
I found thad a lot of domestic noise is coming from the electric field like sparks and switching spikes from PC and other systems in modern houses.
The WB capacitive antenne was not very us full indoors because of the noise pick up, and is only a good performer if it can be placed outside away from the building. An option is place the antenne on a pipe boom outside if you can open an window
Nice is the wide band characteristic up to VHF.
An good source is the book “Aktive Antennen”writen by “Eric T Red and Reinhard Birchel DJ9DV”, Beam-Verlag ISBN 3-88976-043-0 with amateur and professional antennen examples.

One winding closed loop active antenne.
Another option is a closed one winding loop on the window class. It can be aluminium tape or strip or copper pipe.
In the files there is a doc of the 120 active loop antenne. The size can be adjusted for the window.
Be aware thad an problem can be if the windows are made from double class,
There can be a coating on it of a metallic film to reduce solar radiation and also on the edge an aluminium circular closed strip with keep the two glass separate.
This form a magnetic closed loop.
Koppel it with a pick up loop and see if there is a signal EXPERIMENT....

This type off widows have a signal los the film is a static screen and the aluminium strip shorted the RF field.

The only solution is experiment with the options and keep the best.

73’’Joris, KTH rf Design

11601. Chameleon F-LOOP vs Chameleon P-LOOP - Magnetic Loop Shootout

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-17 06:19:58 UTC
From: oliver_watt_000@...
Topic: 11601 Message: 11601

A great video from OH8STN SurvivalTech Nord!

https://youtu.be/Vh-ARP1M8rU https://youtu.be/Vh-ARP1M8rU

- Oliver

11602. Station Equipment Line Ups

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-10-19 01:49:18 UTC
From: jjdobrikin@...
Topic: 11602 Message: 11602

Hi

From Yahoo Group Prime Time Shortwave

Note his Station Line Up.

I am interested in other SWL/MWLer's and what units you are particularly fond of.

I am especially interested in HF Loops Home Brew or Store Bought.

Thanks in advance
73 Jordan ve7jjd

6710AIR Vividh Bharati 9870kHz
Expand Messages

Paul B. Walker, Jr.
Oct 18 7:21 PM

This is AIR's Vividh Bharati Service on 9870kHz. Recorded at 1600UTC on October 18 ,2016. SINPO rating of 55555! This is one of the best recordings I have of the station!

Equipmewnt used includes a Tecsun PL880, Wellbrook ALA1530LNP, EmTech ZM2 Antenna Tuner and DXEngineering HF PreAmp.

Location is Galena, Alaska which is in the rural central interior region of Alaska, 300 miles West of Fairbanks and 300 miles east of Nome.

Audio link of about 45 minutes worth of their programming is below:

AIR Vivdh Bhararti 9870kHz https://www.youtube.com/watch?v=dwNbyb029oo

https://www.youtube.com/watch?v=dwNbyb029oo

AIR Vivdh Bhararti 9870kHz https://www.youtube.com/watch?v=dwNbyb029oo This is AIR's Vividh Bharati Service on 9870kHz. Recorded at 1600UTC on October 18 ,2016. This is AIR's Vivdh Bharati Service. SINPO rating of 5555...

View on www.youtube.com https://www.youtube.com/watch?v=dwNbyb029oo
Preview by Yahoo

The picture linked below is of the signal level on my radio:
http://imgur.com/a/w2NW4 http://imgur.com/a/w2NW4

Paul Walker

11603. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-01 13:06:28 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11603

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11604. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-01 13:06:28 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11604

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11605. DXing Back to our root(s)

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-05 21:54:13 UTC
From: Jordan Dobrikin
Topic: 11605 Message: 11605

Hi

DXing Back to our root(s).

http://www.qsl.net/ko6bb/perfect-radio.html

*"THE SEARCH FOR THE PERFECT RADIO". 73 de Phil KO6BBIf it's more than 1dB above the Noise Floor "IT AIN"T DX"! *

The Perfect Radio, a contemplation.

*13 Apr 2000 About 1953 (10 years old) I was given an old console radio which at first didn't work. But with time and messing with it I actually got it to play. To this day I don't know how as I knew absolutely nothing about them. This was also the first set I ever heard "Shortwave" on. I didn't know anything about it but knew those stations had to be "awful far away" if they said things like "BBC London", "Quito Ecuador" etc. This was just the first of many (probably hundreds if the truth be known) radios that have passed through my hands over the years. The search for "THE PERFECT RADIO" continues to this day. WHAT WOULD A PERFECT RADIO BE? Here are my thoughts on the matter. 1. It would have sensitivity that would allow it to receive absolutely any station that was on the air regardless of atmospheric or distance attenuation. If I wanted to hear CAAMA Radio, Alice Springs Australia on 2310kHz, at high noon my local time, it would receive it. *
*2. The selectivity would be such that it would eliminate all interference from all undesired stations, whether they were 5kHz off frequency or on the same frequency as the station I want to hear. If there were 4 stations on the same frequency at the same time it would select the one I want to hear and reject all others. *
*3. It would be immune from all sources of interference, static, computer hash or atmospheric fading. *
*4. If a station has "muddy" audio it will clean it up and make it CD quality. *
*5. The radio would translate upon demand. If a station was broadcasting in Arabic and I wanted English it would do the translation, accurately and clearly. *
*6. It would sense your desires. If you wanted to hear Voice of Russia in English it would sense your desire and automatically tune itself, adjusting volume, tone and language to suit you. *
*7. The radio would automatically log the station, prepare the reception report and do follow-up reports as needed. *

*8. It would do all this with just a 2 foot whip antenna to preclude having to set up large, bulky, unreliable antenna systems. The perfect radio? NOT! Just think how boring SWLing would be if our equipment met all the

above criteria. If we didn't have to put up with the challenges and vagaries of the Ionosphere, the interference from other stations, the noise of thunderstorms, the uncertainties of unknown (to the listener) languages, the limitations of sensitivity and selectivity, the unexpected tube or transistor blowing out, the antenna being blown down and all the other little surprises our hobby holds for us. *

*NO, the perfect radio is the one I have on the table, or the one I will acquire next week or next year in "THE SEARCH FOR THE PERFECT RADIO". 73 de Phil KO6BB If it's more than 1dB above the Noise Floor "IT AIN"T DX"! *

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73 Jordan VE7JJD

11606. Re: [loopantennas] DXing Back to our root(s)

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-05 22:13:24 UTC
From: Everettsharp
Topic: 11605 Message: 11606

Phil,

You might be able to do that over the Internet on Google.

Everett N4CY

Sent from my iPhone

> On Nov 5, 2016, at 4:54 PM, Jordan Dobrikin jjdobrikin@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
>
> Hi
>
> DXing Back to our root(s).
>
> http://www.qsl.net/ko6bb/perfect-radio.html
>
> "THE SEARCH FOR THE PERFECT RADIO".
> 73 de Phil KO6BB
> If it's more than 1dB above the Noise Floor "IT AIN"T DX"!
>
> The Perfect Radio, a contemplation.
>
> 13 Apr 2000
>
> About 1953 (10 years old) I was given an old console radio which at first didn't work. But with time and messing with it I actually got it to play. To this day I don't know how as I knew absolutely nothing about them. This was also the first set I ever heard "Shortwave" on. I didn't know anything about it but knew those stations had to be "awful far away" if they said things like "BBC London", "Quito Ecuador" etc. This was just the first of many (probably hundreds if the truth be known) radios that have passed through my hands over the years. The search for "THE PERFECT RADIO" continues to this day.
>
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> 2. The selectivity would be such that it would eliminate all interference from all undesired stations, whether they were 5kHz off frequency or on the same frequency as the station I want to hear. If there were 4 stations on the same frequency at the same time it would select the one I want to hear and reject all others.
> 3. It would be immune from all sources of interference, static, computer hash or atmospheric fading.
> 4. If a station has "muddy" audio it will clean it up and make it CD quality.
> 5. The radio would translate upon demand. If a station was broadcasting in Arabic and I

wanted English it would do the translation, accurately and clearly.
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> 7. The radio would automatically log the station, prepare the reception report and do follow-up reports as needed.
> 8. It would do all this with just a 2 foot whip antenna to preclude having to set up large, bulky, unreliable antenna systems.
>
> The perfect radio? NOT! Just think how boring SWLing would be if our equipment met all the above criteria. If we didn't have to put up with the challenges and vagaries of the Ionosphere, the interference from other stations, the noise of thunderstorms, the uncertainties of unknown (to the listener) languages, the limitations of sensitivity and selectivity, the unexpected tube or transistor blowing out, the antenna being blown down and all the other little surprises our hobby holds for us.
> NO, the perfect radio is the one I have on the table, or the one I will acquire next week or next year in "THE SEARCH FOR THE PERFECT RADIO".
> 73 de Phil KO6BB
> If it's more than 1dB above the Noise Floor "IT AIN"T DX"!
> Copyright notice: All material on this page is copyrighted 2000-2007 by Philip Atchley, KO6BB. Permission is granted to use it for non-commercial purposes so long as proper credits are given and the owner is notified via Email at. . .
beaconeer-at-sbcglobal-dot-net
>
>
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>
>
> 73 Jordan VE7JJD
>

11607. Magnetic Loop augmentation

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-06 03:13:19 UTC
From: Jordan Dobrikin
Topic: 11607 Message: 11607

Hi

Many SWL/DXers with some type of outdoors passive wire antenna(s), use some type of tuneable, pre-selection, active or passive, between the antenna and the receiver, for improved performance.

My question is in respect to Magnetic Loop Antennas both active and passive. Will pre-selection, active or passive be benefical?
--
73 Jordan VE7JJD

11608. Re: [ptsw] Magnetic Loop augmentation

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-06 06:13:14 UTC
From: Jordan Dobrikin
Topic: 11608 Message: 11608

Hi
Thanks for a timely response.

What you have described is the basic standard use and procedures of passive and active MW/HF Magnetic Loops.

The Sony and Degnen electronics are not really pre-selection they are there to tune the loop and amplify the signal to the receiver.

What I am exploring is placing a "tuneable preselector" passive or active between these antennas and the receiver.

Same question(s) as to the passive Loops that have an "Antenna Output" connector to output to a receiver; hence in this query this output feed a "tuneable preselector", between the antenna and the receiver.

The key here is "tuneable" as I know many DXers put a wide band low noise, preAMPLIFIER, between Antenna(s) and receiver(s)

73 Jordan ve7jjd

On Sat, Nov 5, 2016 at 9:17 PM, RICK WALD <rickawald@...> wrote:

>
> Jordan ;
>
> I use a Passive GRUNDIG 'AN-200' "TUNABLE" MW magnetic Loop antenna for
> DayTime MW DXing. It remotely couples to your Ferrite Bar Magnetically,
> and greatly enhances the MAGNETIC Groundwave offerings during Daylight
> Hours. IT is similar to the TERK loop ant, and is about the same
> affectiveness. They are hit 'N' miss for Skywave Nightime DX'n.
>
> Best thing is their Nulling Ability, since they are directional. I place
> the radio with ferrite bar broadside to signal and cozy the loop up to
> about centre of loop adjacent to the bar & TUNE the variable capacitor
> 'till you get a DEEP NULL, and then a lil' bit further, and the station
> BOOMS IN !! [Daytime] Even stations that were not even a humm before using
> the AN-200. SO TUNING IS VITAL !! Then, if you have any RF Interference,
> you just rotate both together until the RFI is nulled. I usually set them
> on a small lazy susan, and just slowly rotate them Together, and try
> different positions for the radio/ loops. Once you find where a peticular
> radio "COUPLES BEST " with the loop, it will ALWAYS couple best in that
> position. A lazy susan, or large book works great, and just rotate them
> together.
>
> A Magnetic loop is Wonderful becuase they only amplify the magnetic
> portion of the Radio Freq. Spectrum, and ignore the ELECTRICAL portion of

> the RF Spec, and that is were most of the noise is, in the electirical part.
>
> SO,YOU end up amplifing only the Clean part of the signal. If someone
> has a BETTER Explaination, please jump in with a comment, as I am NOT an
> Electical Engineer, and someone reading this May BE; and I may have some of
> that a lil' wrong, or YOU MAY HAVE A BETTER WAY OF EXPLAINING IT !!
>
> I also use a Degen DE-31 & Sony AN-LP1 amplified Loops for SW . They BOTH
> Have Preselectors!!! The Sony, just A SWITCH for WHICH Metre Band, while
> the Degen has a rotary Variable Capicitor type, so that you can Peak the
> Freq. perfectly! Although,..... the Sony is better on any given Freq.
> than the Degen, at about 5 times the price of the Degen. The Degen can also
> be used for MW, as it has a bar the induces a coupling with your ferrite
> bar, and you just select either MW/SW on the loop output. Place the
> Induction Bar on top of ypour radio, adjacent to the ferrite bar, then YOU
> THEN PEAK THE SIGNAL WITH THE PRESELECTOR . They are both really great
> with any portable that has a grounded 1/8" extrenal antenna jack, & the
> Degen includes a 1/8" female X alligator Clip connector for ones that do
> not have an ext. ant. input ..
>
> SO,.....That was a very long awnser to YUP!!! PRESELECTOR
> WOULD BE INPORTANT !!
>
> THX
> RW
>
> ---
> On Sat, 11/5/16, Jordan Dobrikin jjdobrikin@...
> [primetimeshortwave] <primetimeshortwave@yahoogroups.com> wrote:
>
> Subject: [ptsw] Magnetic Loop augmentation
> To: "ICF 2010" <icf2010@yahoogroups.com>, "Loop Antennas" <
> loopantennas@yahoogroups.com>, "primetimeshortwave" <primetimeshortwave@
> yahoogroups.com>, "shortwave-radio" <shortwave-radio@yahoogroups.com>,
> "shortwave-swl-antenna" <shortwave-swl-antenna@yahoogroups.com>,
> "Shortwaveradios" <shortwaveradios@yahoogroups.com>, "ultralightdx" <
> ultralightdx@yahoogroups.com>
> Received: Saturday, November 5, 2016, 8:13 PM
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> Hi
> Many SWL/DXers with some type of
> outdoors passive wire antenna(s), use some type of tuneable,
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> the receiver, for improved performance.
> My question is in respect to
> Magnetic Loop Antennas both active and passive. Will
> pre-selection, active or passive be benefical?
> --
> 73
> Jordan VE7JJD
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11609. Re: Magnetic Loop augmentation

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-06 18:50:50 UTC
From: max.merli@...
Topic: 11607 Message: 11609

Good questions; i suppose it is more about wideband active loops because tunable loops are, by definition, already tuned to a very narrow band. However, even in the case of a tuned loop, i reformulate the question: how efficient is the suppression of out of band signals compared to a band pass filter?

11610. Modify C.Crane Twin Coil Antenna to HF???

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-08 23:33:59 UTC
From: Jordan Dobrikin
Topic: 11610 Message: 11610

Hi

To the antenna gurus.

I am exploring the possibility of modifying the C.Crane Twin Loop Antenna to HF, 3 mHz to 0+ mHz.

This Link to the Patent will show Schematic and Block Diagram.

The Patent Text indicates that it possible.

Help and or constructive criticism is solicited.

https://www.google.com/patents/US6529169

Publication number US6529169 B2
Publication type Grant
Application number US 09/900,317
Publication date Mar 4, 2003
Filing date Jul 6, 2001
Priority date Jul 6, 2000
Fee status Paid
Also published as CA2414394A1, US20020003503, WO2002005236A1
Inventors Christopher M. Justice
Original Assignee C. Crane Company, Inc.
Export Citation BiBTeX, EndNote, RefMan
Patent Citations (9), Referenced by (29), Classifications (10), Legal Events (3)
External Links: USPTO, USPTO Assignment, Espacenet
==========
Twin coil antenna
US 6529169 B2
Abstract
A ferrite core antenna having two spaced signal pick-up coils coupled through a transformer so that the signals from the two coils are additively combined in the primary of the transformer. A variable capacitor connected to the two coils tunes the antenna to selected frequencies. This results in amplification of the signal.
Images(5) Patent Drawing
Claims(13)
What is claimed is:
1. An antenna for a radio receiver comprising a ferrite rod; spaced coils wound about the ferrite rod; a variable capacitor element connecting each coil together; and a combiner connecting each coil together, the combiner additively combining out-of-phase signals induced in the coils by received radio signals so as to provide an output signal corresponding to the sum of

the out-of-phase signals in the coils.
2. The antenna of claim 1, wherein said combiner comprises a transformer.
3. The antenna of claim 2, wherein the out-of-phase signals from the coils are connected to opposite ends of a primary winding of said transformer, and said output signal is supplied from a secondary winding of said transformer.
4. The antenna of claim 3, wherein said coils, said transformer and said variable capacitor form a resonant circuit which is tuned by said variable capacitor.
5. The antenna of claim 4, wherein said variable capacitor has a capacitance value which is electronically variable.
6. The antenna of claim 5 further comprising an amplifier for amplifying the output signal and for supplying the output signal to the radio receiver, and a variable voltage source connected to said variable capacitor for tuning the antenna to selected operating frequencies.
7. An antenna for a radio receiver comprising a ferrite rod; spaced pick-up coils wound about the ferrite rod, signals being induced in the pick-up coils by received magnetic fields in the ferrite rod, the signals being of opposite phase; and a combiner connected to the coils for additively combining the opposite phase signals induced in the coils to provide an output signal corresponding to the sum of said opposite phase signals.
8. The antenna of claim 7, wherein said combiner comprises a transformer.
9. The antenna of claim 8, wherein the opposite phase signals from the coils are connected to opposite ends of a primary winding of said transformer, and said output signal is supplied from a secondary winding of said transformer.
10. The antenna of claim 9 further comprising a variable capacitor connected to the pick-up coils, the pick-up coils, the transformer and the variable capacitor forming a resonant circuit, and the variable capacitor tuning the resonant circuit to selected frequencies.
11. The antenna of claim 10, wherein a first one of said pick-up coils has one end grounded, another end connected through the primary winding of said transformer to a second one of said pick-up coils, and said second pick-up coil is connected said variable capacitor.
12. The antenna of claim 11, wherein said variable capacitor is an electronically variable varactor diode. electronically variable varactor diode.
13. The antenna of claim 12 further comprising an amplifier for receiving the output signal from said transformer and for providing an amplified output signal; and a variable voltage source connected to the variable capacitor for tuning the antenna.
Description
This application claims benefit of Provisional application Ser. No. 60/216,267, filed Jul. 6, 2000.
TECHNICAL FIELD
The invention relates to an active ferrite core radio receiver antenna combined with an inductive and capacitance network for receiving and conveying signal energy between the active antenna and receiver. The active antenna comprises a resonant circuit which is electronically tunable to a

frequency of interest.

BACKGROUND OF THE INVENTION

Ferrite core antennas are widely used as antennas for radio receivers, particularly for AM broadcast band radios, to increase radiation resistance over that simple Hertzian dipole antenna. This is done by forming the conducting element of the antenna in a coil or loop, and placing a ferrite body inside the loop. The ferrite has the effect of concentrating and intensifying the received magnetic field inside the loop. This is the result of the high permeability, μ, of the ferrite material. The incorporation of ferrite into the antenna coil is most easily accomplished by winding the antenna coil around the ferrite rod.

The use of a ferrite rod increases the loop's radiation resistance by a factor of μe 2, where μe, is the ferrite's effective magnetic permeability. Typically, for frequencies in the 100 to 2000 kHz range, the value of μe for typical ferrites is from about 100 to about 10,000. Thus, for a value of μe of, e.g., 1,000, ferrite can increase the antenna's radiation resistance, over a Hertzian dipole, by a factor of 1,000,000.

The ferrite core or rod itself tends to absorb some of the signal power. This represents the work done in “flipping” the alignment of the magnetic domains inside the core with each signal element. This ferrite rod “ferrite resistance” adds resistance in series with the antenna. Even with this added resistance, the antenna's resistance is typically just a few ohms, or even one ohm or less. However, in operation, the antenna must be coupled to a large impedance of the receiver electronics. This is usually accomplished by adding a capacitor to turn the antenna loop into a resonant circuit. However, when a signal enters a ferrite rod antenna that is tuned to resonance with a coil and capacitor, the magnetic lines of flux begin to saturate. This is due to sympathetic resonance. Sympathetic resonance is much like setting two guitars close to each other and plucking the string on one of the guitars. If both strings are tuned the same, the plucked string sound waves will cause the corresponding string on the other guitar to vibrate identically. When this saturation occurs in a ferrite core antenna, the ferrite rod antenna takes on polarity, much like a standard magnet. Ferrite antennas of the prior art have only one pick-up coil, and this coil receives the sympathetic resonance from only one-half of the ferrite rod. This results in loss of efficiency and limits the signal-to-noise ratio available to the receiver electronics.

Thus, there is a need for improved efficiency and a higher signal-to-noise ratio antenna that does not saturate at high frequencies, and it is to these ends that the present invention is directed.

SUMMARY OF THE INVENTION

The invention provides an antenna for a radio receiver that has high efficiency, high signal-to-noise ratio and that does not saturate at high frequencies. This is accomplished by an antenna structure which employs a ferrite core having two (or more) coils coupled together and located on the ferrite core such that the magnetic fields coupled to the coils induce signals which combine to produce a resulting signal level equivalent to the combined signals in the coils. The coils may be coupled through a transformer where the combined signals of the coils are received in the

primary of the transformer. The transformer coupling the antenna coils can dramatically narrow the bandwidth of the received signal. In addition, the antenna coils and the transformer windings may be connected to a capacitor to form a resonant circuit. The capacitor may be variable so the resonant frequency of the antenna may be set by tuning the capacitor. This results in an increased signal level and reduced interference and noise.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 shows a conventional ferrite core antenna of the prior art;

FIG. 2 shows a ferrite rod antenna with a pair of coils coupled through a tuning capacitor, and the coils being 180 degrees out of phase;

FIG. 3 shows a representation of the signals at the outputs of the windings of the antenna shown in FIG. 2;

FIG. 4 shows an embodiment of a ferrite rod antenna of the invention having a pair of coils, coupled through a variable tuning capacitor and a transformer, where the tuning capacitor and the transformer are electrically in parallel;

FIG. 5 shows a representation of the signals at the output of the transformer of the antenna shown in FIG. 4;

FIG. 6 is a block diagram of another embodiment of an antenna of the invention, the figure showing the antenna coupled to associated electronics; and

FIG. 7 is a circuit diagram of the antenna of FIG. 6.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The invention is particularly applicable to antennas used with conventional radio receivers for use in low frequency (LF), mid-wave (MW) frequency, and high frequency (HF) bands, and will be described in that context. By proper selection of materials and components, the invention may also be used with radio receivers operating at VHF and UHF frequencies. It will be appreciated, however, that these uses are illustrative of only one utility of the invention.

FIG. 1 illustrated a conventional known ferrite rod antenna 1 such as may be used in a conventional AM broadcast band radio receiver. As shown, the antenna may comprise an elongated ferrite rod 3 which has an RF tuning coil 7 wound about one end of the rod. A second pick-up coil 5 may be wound around the rod adjacent to the RF tuning coil. One end of the pick-up coil may be grounded as shown at 13. The other end 9 of the pick-up coil provides the output signal. The RF tuning coil may be connected in parallel with a tuning capacitor 11 to form a resonant circuit which may be tuned to desired frequencies of interest. In operation, the ferrite rod concentrates the magnetic field inside of the tuning coil 7 at the frequency to which the resonant circuit is tuned. The energy in the RF tuning coil is coupled by transformer action and sympathetic resonance to pick-up coil 5 which outputs the signal at 9 to the radio receiver. As described previously, since the antenna 1 uses only one pick-up coil and only one-half of the ferrite rod, it exhibits low efficiency and low signal-to-noise ratio.

In contrast, the invention provides a multiple coil ferrite antenna that provides high efficiency and high signal-to-noise ratio. As a result, it affords substantially better radio reception than conventional ferrite rod antennas of the type illustrated in FIG. 1. As will be explained in more

detail below, the invention employs two or more spaced coils on a ferrite core. Magnetic fields inside of the ferrite core induce signals in the spaced coils. The coils are coupled to a combiner which combines the signals additively from the spaced coils to provide a significantly higher signal level to the radio receiver. Preferably, was will be described below, the combiner comprises a transformer with the primary of the transformer connected to the spaced coils. The coils may also be connected to a variable capacitor to form a tuned resonant circuit, with the frequency of resonance determined by the combined inductance of the coils and the transformer. Each coil is used for both tuning and for pick-up. The signals from each coil are opposite in phase but are combined additively in the primary of the transformer to result in a significantly higher received RF signal. Tuning the antenna by means of the variable capacitor significantly enhances signal-to-noise ratio since it reduces the effective bandwidth of the antenna to discriminate against interfering signals and reduce the noise coupled to the receiver.

FIGS. 2 and 3 show a ferrite rod antenna, 21, having two spaced coils, 27, 28 wound about a ferrite rod 23 adjacent opposite ends of the rod, and connected to a variable tuning capacitor 31. One coil 27 receives 0-180 degrees of the incoming signal, e.g., an unmodulated sine wave, and the other coil 28 receives 180-0 degrees of the incoming signal. Thus, the signals on terminals A and B from coils 27 and 28 are inverted and out of phase as shown in FIG. 3, where the combined waveforms from terminals A and B have a resultant of 0 volts peak-to-peak. Thus, in the arrangement of FIG. 2, the signals effectively cancel themselves out because the RF potential between the two coils becomes zero volts when the signals are combined, i.e., the signals subtract as indicated in the view of the waveforms in FIG. 3.

By way of contrast and comparison, in a twin coil antenna according to the invention, the signals are combined so as to be additive. This is shown in FIGS. 4 and 5 where the signals from the coils 27, 28 are combined through the primary of a transformer 33. As an example, coils, 27 and 28, may be 40 turns of 12 strand Litz wire, 12 mm diameter, inserted over the ends of the ferrite rod. The winding rotation is in the same direction on both coils, i.e., coil 27 has right hand rotation and coil 28 has right hand rotation on the windings. The total inductance (L1) of the circuit of FIG. 4 is the totals inductance of coils 27 and 28 and the transformer 33. The antenna 21 of FIG. 4 is resonant at the frequency set by the total inductance and the capacitance (C) of tuning capacitor 31. These elements form an LC resonant circuit. The invention produces a significant increase in signal strength over a conventional ferrite antenna.

The secondary of transformer 33 serves two purposes. First, it is the signal pick-up coil for the transformer 33, and, second, it also limits the output bandwidth of the signal. Varying the inductance of the secondary winding of transformer will correspondingly make the output signal bandwidth greater or narrower. A narrower bandwidth increases the amplitude, reduces the noise and interference, and results in greater signal to noise ratio and more overall gain at the frequency to which the antenna is tuned.

The type of ferrite used will vary depending on the operating frequency desired. There are many types of ferrite available, as is well known to those skilled in the art, and one may be selected that has the best saturation and permeability in the operating frequency range of interest. By proper selection of the ferrite material to saturate at VHF and UHF frequencies, and by matching the inductances, ferrite material and coupling transformer, the antenna of the invention may also be used at VHF and UHF frequencies.

The antenna of the invention can be incorporated into any receiver that uses or is designed for use with a conventional ferrite rod antenna, e.g., for reception of any LW, MW, HF, VHF and UHF frequency band signals. Also, from the foregoing, it will be recognized that additional refinements can be made in the antenna to enable it to be used for other frequencies, since the operating frequency bandwidth can easily be manipulated by adjusting the inductance of the secondary transformer 33. The antenna can be used easily as a replacement unit to improve reception on any conventional radio receiver that has LW, MW, HF, VHF and UHF frequency bands, and also has applications for other frequencies.

A ferrite core antenna according to a preferred embodiment of the invention is shown in FIGS. 6 and 7. FIG. 6 is a functional block diagram of the antenna and associated electronics, and FIG. 7 is a more detailed circuit diagram of an example of the antenna of FIG. 6. For purposes of illustration, the circuit is shown disposed on two boards, an Antenna board and a Control board connected by a cable 50. It will be appreciated, however, that a single board may also be used. The illustrated embodiment in FIGS. 6 and 7 is intended for the MW broadcast band, but it will be appreciated that the principles may be readily extended to other frequency bands.

As shown in the FIGURES, the signal from transformer 33 may be fed into a J-FET push/pull amplifier 136, comprising transistors Q1 and Q2, resistors R3 and R4, and hot carrier diodes D1 and D2, for linear amplification of the signal. Hot carrier diodes are preferably used on the drains of the FETs for an ultra-quick discharge of the capacitor C2 connecting the drains of Q1 and Q2. There results a noticeable improvement in bandwidth and improved AM amplification when the hot carrier diodes were used. The outputs from the sources of transistors Q1, Q2 of the push-pull amplifier 136 are supplied to a transformer T2. Transformer T2 is preferably a center tapped transformer that feeds voltage from a power supply to the sources of the J-FETs. The signal is amplified and the combined output of the amplifiers can be seen on the secondary of Transformer T2.

The output of transformer T2 is sent through a capacitor 43 and then to transistor Q3 which is used as a buffer amplifier to drive low impedance applications. The emitter 46 of transistor Q3 goes through a filter 47 comprising an inductor L3 and capacitor C6 to eliminate low frequency oscillations. The collector 45 output of transistor Q3 goes through a capacitor 48 for decoupling and to a 330-ohm resistor 49 for impedance matching and to eliminate feedback in a cable 50 connected to a jack J1. The signal from transistor Q3 and capacitor 48 is the combined output signals from coils 27 and 28.

The output signal from Q3 is driven through the cable 50 and may be terminated in a toroid transformer 131 on the control board. The output of this toroid transformer is matched to drive the front-end of the receiver directly or it may be inductively coupled to a receiver's existing ferrite antenna using a plug-in ferrite bar antenna.

The antenna is tuned electronically with a voltage controlled variable capacitance varactor diode D3 through a network of components that keep the tuning voltage stable and accurate even in the presence of a varying DC power supply voltage and induced RF through the connecting cable. The reference voltage for the tuning may be taken from a transistor Q4, which serves as a 5-volt regulator. The regulated 5 volts from Q4 may be fed through a 56 k ohms 51 which is in series with variable resistors 121 and 122 on the control board, and to the in put of an operational amplifier 52. Variable resistors 121 and 122, may have values of 100 k ohms and 5 k ohms, respectively, serve as manual coarse and fine tuning controls for the varactor diode D3, and act together with resistor 51 as a very stable voltage divider. The output of the voltage divider is directly fed into the operational amplifier's non-inverting (+) input. Resistors 61 and 62 form another voltage divider and give feedback to the inverting (−) input of amplifier 52 to allow greater voltage range that is fully regulated at the output. A resistor 63 is a load resistor on the output of the amplifier for stability. This output voltage is fed into a low frequency RF filter comprising a capacitor 72, inductor 74 and capacitor 73. The voltage to the cathode of varactor diode D3 may be supplied through a resistor 64 (100 k ohms) and capacitor 74. The anode of the varactor is directly coupled to winding 28 and ultimately to ground through transformer 33 and winding 27. As the voltage from amplifier 52 varies in response to the tuning controls 121 and 122, the capacitance of the varactor varies and tunes the resonant circuit. Using this regulated tuning method shown, the voltage input into the device can vary from, e.g., 6.5 to 12 volts, and the antenna tuning will remain exactly where the user preset the frequency.

The control board may contain few components used principally to supply voltage and user interface to the device. As noted above, the central board may be connected to the antenna board via jacks J1 and J2 and cable 50. Diode 101 may be a standard diode that protects the unit from reverse polarity voltage at jack J3. Switch S1 is a simple on/off switch. Capacitors 110, 112, and 113 and torroid transformer III are DC line filters, mainly used when the device is plugged into an external DC source via jack J3. Normally, DC power may be supplied by a battery 114. Variable resisters 121 and 122, which may be 100 k ohms and 5 k ohms potentiometers, serve as coarse and fine tuning controls for the varactor as described above. R101 is a preset resistor to keep the voltage on the varactor pre-tuned to a specific frequency. Transformer 131, which receives the output signal from Q3, and capacitor 132 are used for the termination transformer and impedance matching. This is the final stage of the device before a clean, amplified signal is delivered to the receiver via jack J4.

A preferred embodiment of the invention as described herein comprises a ferrite core antenna, characterized by two spaced windings. The two windings are connected through a combiner, for example, the primary winding

of a transformer which additionally combines the signals from the two coils
to produce an increased output signal level. Preferably, the antenna is
resonant at the frequency of interest, and the resonant frequency of the
antenna is set by a tuning capacitor.
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Patent Citations
Cited Patent Filing date Publication date Applicant Title
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US4101899 * Dec 8, 1976 Jul 18, 1978 The United States Of America As
Represented By The Secretary Of The Army Compact low-profile electrically
small vhf antenna
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separate sequentially wound windings
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signal separating device having isolating and matching circuitry for split
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coil assembly for an inductively coupled transponder
US5420579 Dec 28, 1993 May 30, 1995 Bio Medic Data Systems, Inc. Antenna
and driving circuit for transmitting and receiving signals to and from a
passive transponder
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Company Ferrite core marker
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antenna device
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Ltd. Enhanced
range transponder system
* Cited by examiner
Referenced by
Citing Patent Filing date Publication date Applicant Title
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reducing
US7081864 * Sep 30, 2002 Jul 25, 2006 Sumida Corporation Antenna coil and
transmission antenna
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Foundation Frequency-agile
beam scanning reconfigurable antenna
US7268634 * Aug 27, 2004 Sep 11, 2007 The Hong Kong University Of Science
And Technology Dual-mode voltage controlled oscillator using integrated
variable inductors
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device having enhanced reception sensitivity in wide bands
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efficiency ferrite antenna system
US7652541 Aug 2, 2007 Jan 26, 2010 The Hong Kong University of Sciences and
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WO2005112193A3 * May 11, 2005 Aug 24, 2006 Penn State Res Found Novel frequency-agile beam scanning reconfigurable antenna
* Cited by examiner
Classifications
U.S. Classification 343/788, 343/867, 343/787, 343/745
International Classification H01Q7/08, G08B13/24
Cooperative Classification G08B13/2477, H01Q7/08
European Classification G08B13/24B7A3, H01Q7/08
Legal Events

Date Code Event Description
Jun 16, 2006 FPAY Fee payment
Year of fee payment: 4
Aug 24, 2010 FPAY Fee payment
Year of fee payment: 8
Aug 25, 2014 FPAY Fee payment
Year of fee payment: 12
Google Home - Sitemap - USPTO Bulk Downloads - Privacy Policy - Terms of Service - About Google Patents - Send Feedback
Data provided by IFI CLAIMS Patent Services
Conversation opened. 1 read message.

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<https://accounts.google.com/SignOutOptions?hl=en&continue=https://mail.google.com/mail&service=mail>
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COMPOSE
Labels
Inbox (3) <https://mail.google.com/mail/u/0/#inbox>
Starred <https://mail.google.com/mail/u/0/#starred>
Important <https://mail.google.com/mail/u/0/#imp>
Sent Mail <https://mail.google.com/mail/u/0/#sent>
Drafts (1) <https://mail.google.com/mail/u/0/#drafts>
Circles <https://mail.google.com/mail/u/0/#circle>
More

Hangouts

More

17 of *367*

[image: Print all]
[image: In new window]
Re: Product Question (Thread:160491)
Inbox
x
Customer Service
8:55 AM (23 hours ago)
to me
Dear Jordan;

Thank you for your inquiry. In order, to modify the Twin Coil AM Antenna to work with the HF Band, the antenna would have to be completely reengineered. Unfortunately, this is not something we have done, or have

any information regarding. If I can be of any further assistance, please
let me know.

Angie C.
Returns/Repairs Supervisor
C. Crane Company, Inc.

800-522-8863
Customer Service and Technical Support Hours
Mon - Fri 8:15am - 5:00pm (PST)
Saturday, Sunday and Major Holidays (Closed)

Orders
800-522-8863
Open 24/7, 365 days per year.

Sign Up For New Products and Special Offer Notifications: http://www.
ccrane.com/subscribe

----- Original Message -----

From: jjdobrikin@gmail.com
Sent: 05/11/2016 5:21:23 PM
To: customerservice@...
Subject: Product Question (Thread:160491)

First Name: Jordan

Last Name: Dobrikin

Daytime Phone Number: 604-433-2812

Email Address: jjdobrikin@...

Subject: Product Question

Other: Modify TwinCoil to HF

Order Number:

Message: Hi I would like information on the feasibility of modifying a Twin
Coil MW Antenna to the HF Band(s). 73 Jordan ve7jjd
Click here to Reply or Forward
0.13 GB (0%) of 15 GB used
Manage <https://www.google.com/settings/u/0/storage?hl=en>
Terms <https://www.google.com/intl/en/policies/terms/> - Privacy
<https://www.google.com/intl/en/policies/privacy/>
Last account activity: 5 minutes ago
Details
Customer Service

Add to circles
Show details
Compose:

Modift C,Crane Twin Coil Antenna to HF
[image: Minimize][image: Pop-out][image: Close]
73 Jordan VE7JJD Patent Text (Edited) below

11611. C.Crane Patent Drawings,Schematic and Block Diagram

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-08 23:38:22 UTC
From: Jordan Dobrikin
Topic: 11611 Message: 11611

Images(5)
[image: Patent Drawing]
<https://patentimages.storage.googleapis.com/US6529169B2/US06529169-20030304-D00000.png>

[image: Patent Drawing]
<https://patentimages.storage.googleapis.com/US6529169B2/US06529169-20030304-D00001.png>

[image: Patent Drawing]
<https://patentimages.storage.googleapis.com/US6529169B2/US06529169-20030304-D00002.png>

[image: Patent Drawing]
<https://patentimages.storage.googleapis.com/US6529169B2/US06529169-20030304-D00003.png>

[image: Patent Drawing]
<https://patentimages.storage.googleapis.com/US6529169B2/US06529169-20030304-D00004.png>

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73 de Jordan VE7JJD

11612. Fwd: [Shortwave-SWL-Antenna] Re: [ptsw] Magnetic Loop augmentation

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-10 16:15:24 UTC
From: Jordan Dobrikin
Topic: 11612 Message: 11612

---------- Forwarded message ----------
From: JRTOW3RD@... [Shortwave-SWL-Antenna] <
Shortwave-SWL-Antenna@yahoogroups.com>
Date: Thu, Nov 10, 2016 at 5:59 AM
Subject: [Shortwave-SWL-Antenna] Re: [ptsw] Magnetic Loop augmentation
To: Shortwave-SWL-Antenna@yahoogroups.com

~15 years ago, when Lowe had gone under, I bought the last new HF-150 receiver and matching PR-150 preselector I could find from EEB in VA. I still had my much modified NRD-525 and R8, I just needed a new 'toy' to kick re-start my hobby - and it did. A few years passed and my local powerline QRM had gotten worse - I bought a Pixel, now DX Eng, RF Pro-1a mag loop antenna (... and a then new model Palstar R30a...), which became indispensable, especially when I moved to my garden home 3+ years back - with it's no outside antennas edict and HOA. I put the loop on a tripod base in the attic - and now enjoy LW, MW, & SW listening again. Of course, first I had to put the PR-150, with it's dual tuned circuits, to limit what frequency range I fed into some receivers, namely, the Lowe HF-150 and Palstar R30a.

The problem isn't in the antenna - it's produced in the receiver's front end by strong local stations mixing and cross-modulating weaker stations. It can be lessened - or eliminated - by passing the loop antenna's wideband signal hodge podge thru a frequency selective pass filter, like a real preselector. The now pricey and rare PR-150 is a dual tuned circuit such preselector which covers 100 kHz - 30 MHz in seven bands and includes the options of a wideband bypass, a built-in crunchproof CATV type follow-up amplifier, and a 10 dB attenuator. With it peaked, even on LW, CM products are gone. Some receivers just need a 6 dB drop to elimiate the production of CM/IM products, perhaps explaining whey the RF Pro-1a came with in-line 6dB attenuators.

A traditional antenna tuner is a network for matching a transmission line to a complex impedance. While it is frequency sensitive, it pales in comparison to a real preselector at lowering the level of strong off-frequency local signals. Yes, a preselector can be most useful between an amplified wideband magnetic loop antenna and a receiver.

Posted by: JRTOW3RD@...

[Shortwave-SWL-Antenna] <Shortwave-SWL-Antenna@yahoogroups.com>
Here are your Messages from the
"Shortwave-SWL-Antenna" Group on YAHOO !
.
NOTICE : If your are going to re-use the Writings and

Infomation in-whole or in-part that you have found in
this YAHOO! Group; at other websites and places on the
Internet; including other forms of Media.
THEN - Please give Proper Attribution to this Group.
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Shortwave Listeners (SWL) Antennas Group YAHOO !
http://groups.yahoo.com/group/Shortwave-SWL-Antenna/

moderately yours ~ RHF
• 73 Jordan VE7JJD

11613. Re: Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-10 19:13:51 UTC
From: chrism1111@...
Topic: 11549 Message: 11613

Apparently Litz wire if affordable, is better. Be sure you know the quality of it. Speaker wire is no different then single strand , electrically, but is more curvable. Litz wire is a series of individual insulated wires, twisted in a precise number of twists to the inch, I believe 12 twists to the inch is what is valued most. And a maker might bundle say 11 wires to a bundle then twist 10 bundles making it 110 strands. Now you have to solder all of them at each end and avoid taps. So if you make coils for your set make a coil for each band you want to cover.

this web site may help.

http://www.makearadio.com http://www.makearadio.com/crystal/16.php

Please not the owner of it does not answer emails or questions. So many people use ad blocking software it stops him from making a buck or two. His knowledge bas is quite large and his projects are many, including antenni I remeber being called a Crystal Kludge, in a book from the now extinct Lindsy's Publications!

He apparently had a how to on making a wire twister to make Litz wire. I could not find it. Basically it must be a version of a twine/rope making machine.

I doubt I helped but maybe I did. Others will have and better things to add I am sure. good luck

11614. Re: [loopantennas] Re: Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-10 22:03:33 UTC
From: Jordan Dobrikin
Topic: 11549 Message: 11614

Hi

What you are looking for is maximum surface area to build lowest inductance loop(s).

Litz comes in several gagues each size up giving more strands of wire.

Speaker cord is significantly different and better than single strand at Radio Frequencies.

Flex Weave Multi Strand Antenna Wire is better than Speaker wire or household ZIP cord.

73 de Jordan ve7jjd

On Thu, Nov 10, 2016 at 11:13 AM, chrism1111@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Apparently Litz wire if affordable, is better. Be sure you know the
> quality of it. Speaker wire is no different then single strand ,
> electrically, but is more curvable. Litz wire is a series of individual
> insulated wires, twisted in a precise number of twists to the inch, I
> believe 12 twists to the inch is what is valued most. And a maker might
> bundle say 11 wires to a bundle then twist 10 bundles making it 110
> strands. Now you have to solder all of them at each end and avoid taps. So
> if you make coils for your set make a coil for each band you want to cover.
>
> this web site may help.
>
> http://www.makearadio.com <http://www.makearadio.com/crystal/16.php>
>
>
>
> Please not the owner of it does not answer emails or questions. So many
> people use ad blocking software it stops him from making a buck or two. His
> knowledge bas is quite large and his projects are many, including antenni I
> remeber being called a Crystal Kludge, in a book from the now extinct
> Lindsy's Publications!
>
> He apparently had a how to on making a wire twister to make Litz wire. I
> could not find it. Basically it must be a version of a twine/rope making
> machine.
>
> I doubt I helped but maybe I did. Others will have and better things to
> add I am sure. good luck

>
>
>

--
73 Jordan VE7JJD

11616. Re: [loopantennas] Re: Loop Material

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-11 02:59:19 UTC
From: BobC
Topic: 11549 Message: 11616

Litz wire is primarily used to lower the resistance of a conductor to the flow of ac current. This resistance is caused by limitation of current flow to the area near the conductor's outer surface; this resistance increases with frequency. By dividing a conductor into multiple, insulated strands, the surface area for the same diameter wire is effectively increased, thus lowering its RF resistance. According to the literature, the effectiveness of Litz wire drops off significantly between 1 MHz and 2 MHz. It was used extensively in air-core loop antennas for AM tube radios and may still be found in some ferrite loop sticks.

I have used Litz wire on occasion, mainly adapting old radio coils to portable loops, but never found them to be significantly better. My longwave loop is 3-ft square (51-in dia.), consists of 80 turns wound in a single plane pancake style using AWG 22 stranded wire. Length of the wire is in the hundreds of feet. Still, it produces a very high Q, i.e., low resistance at resonance, resulting in a bandwidth so narrow that it must be repeaked every 1 kHz. While they last, some high-powered trans-Atlantic broadcast stations still make it across the pond and can be sniffed out with this antenna.

Bob C.

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11617. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-13 13:15:49 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11617

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /MMG-F25-F28-F29-NiZnFerriteMaterial.pdf
Uploaded by : jorschei <kthkit@...>
Description : Ferrite F28 documentation from NEOSID/MMG may be usefull for antenne bars up to mid range 70MHz and shortwave receivers.See files

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/MMG-F25-F28-F29-NiZnFerriteMaterial.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

jorschei <kthkit@...>

11618. Ferrite mix for antenna bars at higher frequency's

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-13 13:26:33 UTC
From: kthkit@...
Topic: 11618 Message: 11618

Hi all,
I found some ferrite antenna bars type F28 from NEOSID/MMG and the data sheet specification.
I think it is used for old type PAGER receivers working on the mid range VHF frequency + -70 MHz.
The initial ferrite los is low and the initial permeability is 30.
Have any one experience with this ferrite mix as antenna bar for shortwave receivers ?

See data sheet in the files.

73’Joris

11621. Please start your own thread for a new question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-14 21:35:29 UTC
From: alienrelics@...
Topic: 11621 Message: 11621

A reminder:

To post a question to the list, please send an email to loopantennas@yahoogroups.com

Please do not reply to someone else's thread and change the subject. Please do not reply to the digest, even if you delete all the quoted messages. Please do not use the "Updates to your Yahoogroups" to post a question to the list. Please do not reply to "New file uploaded..." messages.

Yahoogroups will see all of these as a continuation of the other thread and will mix your thread in with the other one.

Thank you,
Steve Greenfield AE7HD
listowner of loopantennas

11622. Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-15 01:32:05 UTC
From: n7chs@...
Topic: 11622 Message: 11622

I have committed myself to building a small loop antenna. I have acquired a variable vacuum capacitor and now I am looking for the radiating element. Your assistance is appreciated in narrowing down my choices in:

Loop Material
1 inch copper pipe 7/8 inch helical coax Number of Loops
One loop 8 feet in diameter Two loops 3 - 4 feet in diameter With this arrangement I would use one length of coax to form two loops
I have no desire to recreate the wheel so I look to your thoughts or suggestions.
Thanks,
Chuck N7CHS

11623. Re: [loopantennas] Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-15 05:30:32 UTC
From: Jordan Dobrikin
Topic: 11622 Message: 11623

Hi

The name of the game is maximum surface area. RF propagates on the surface of a wire/conductor.

If your metal working skills are up to it consider rectangular ribbon/bar stock. Look at a Fractal Loop.

I would recommend a single loop as another rule of thumb is Maximum Area. A second loop will add to the distributed capacitance lowering the maximum resonant frequency.

Wire/conductor length roughly 1/20th wavelength.

73 de Jordan ve7jjd

On Mon, Nov 14, 2016 at 5:32 PM, n7chs@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> I have committed myself to building a small loop antenna. I have acquired
> a variable vacuum capacitor and now I am looking for the radiating
> element. Your assistance is appreciated in narrowing down my choices in:
>
> Loop Material
>
> 1. 1 inch copper pipe
> 2. 7/8 inch helical coax
>
> Number of Loops
>
> 1. One loop 8 feet in diameter
> 2. Two loops 3 - 4 feet in diameter
> 1. With this arrangement I would use one length of coax to form two
> loops
>
> I have no desire to recreate the wheel so I look to your thoughts or
> suggestions.
> Thanks,
> Chuck N7CHS
>
>
>
>

--
73 Jordan VE7JJD

11624. Re: [loopantennas] Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-15 06:25:50 UTC
From: Jordan Dobrikin
Topic: 11622 Message: 11624

Hi

some web pages to look at

http://www.i1wqrlinkradio.com/antype/ch12/chiave17.htm

http://www.qsl.net/dl4yhf/qrp/index.html

https://www.google.ca/search?q=fractal+loop+antenna&ie=utf-8&oe=utf-8&gws_rd=cr&ei=yp0qWJX
KEYXRjAOA3aTgCA

https://en.wikipedia.org/wiki/Fractal_antenna

http://www.mixw.co.uk/MagLoop/magloopF.htm

On Mon, Nov 14, 2016 at 9:30 PM, Jordan Dobrikin <jjdobrikin@...>
wrote:

> Hi
>
> The name of the game is maximum surface area. RF propagates on the surface
> of a wire/conductor.
>
> If your metal working skills are up to it consider rectangular ribbon/bar
> stock. Look at a Fractal Loop.
>
> I would recommend a single loop as another rule of thumb is Maximum Area.
> A second loop will add to the distributed capacitance lowering the maximum
> resonant frequency.
>
> Wire/conductor length roughly 1/20th wavelength.
>
> 73 de Jordan ve7jjd
>
> On Mon, Nov 14, 2016 at 5:32 PM, n7chs@... [loopantennas] <
> loopantennas@yahoogroups.com> wrote:
>
>>
>>
>> I have committed myself to building a small loop antenna. I have acquired
>> a variable vacuum capacitor and now I am looking for the radiating
>> element. Your assistance is appreciated in narrowing down my choices in:
>>
>> Loop Material
>>
>> 1. 1 inch copper pipe
>> 2. 7/8 inch helical coax

>>
>> Number of Loops
>>
>> 1. One loop 8 feet in diameter
>> 2. Two loops 3 - 4 feet in diameter
>> 1. With this arrangement I would use one length of coax to form
>> two loops
>>
>> I have no desire to recreate the wheel so I look to your thoughts or
>> suggestions.
>> Thanks,
>> Chuck N7CHS
>>
>>
>>
>>
>
>
>
> --
> 73 Jordan VE7JJD
>

--
73 Jordan VE7JJD

11625. Re: [loopantennas] Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-15 19:14:05 UTC
From: Ray, W4BYG
Topic: 11622 Message: 11625

Chuck,
You don't mention what frequencies you wish to cover. Also, I don't believe you'll see much difference between the 1" copper pipe and the 7/8" Heliax, (other than the copper pipe will be much heavier to deal with).

Generally I would keep a transmitting loop slightly less than 1/4 wavelength circumference at the highest frequency you are planning for. This gives very good efficiency at that frequency and reasonable efficiency the next band down.

My 20 meter loop has about .2 wavelength circumference of 1.5" copper strap mounted on a PVC frame and is tuned by a 50pf vacuum cap. It is narrow band as expected, but works surprisingly well on 20.

I have no experience with a double loop.
73,
Ray, W4BYG

On 11/14/2016 8:32 PM, n7chs@... [loopantennas] wrote:
>
> I have committed myself to building a small loop antenna. I have
> acquired a variable vacuum capacitor and now I am looking for the
> radiating element. Your assistance is appreciated in narrowing down
> my choices in:
>
> Loop Material
>
> 1. 1 inch copper pipe
> 2. 7/8 inch helical coax
>
> Number of Loops
>
> 1. One loop 8 feet in diameter
> 2. Two loops 3 - 4 feet in diameter
> 1. With this arrangement I would use one length of coax to form
> two loops
>
> I have no desire to recreate the wheel so I look to your thoughts or
> suggestions.
> Thanks,
> Chuck N7CHS
>
>
>

--
I'm no longer young enough to know everything!

11626. Re: Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-15 20:22:43 UTC
From: Steve Adler
Topic: 11622 Message: 11626

Hi Chuck, I have had tremendous success with my design!

The first iteration was for Top Band but quite scaleable up to 40 metres as you will see.

5 x "SFA" double loop TMLA's have now been constructed worldwide with repeatable results..

http://members.iinet.net.au/~sadler@.../

73 Steve VK5SFA

11627. Re: [loopantennas] Re: Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-15 21:28:11 UTC
From: Jordan Dobrikin
Topic: 11622 Message: 11627

Hi
Thanks for giving the name of what I was trying to describe when I used the name ribbon.
Next is to use strap thick enough to be self supporting.
73 de Jordan ve7jjd

On Tue, Nov 15, 2016 at 12:22 PM, Steve Adler steve_adler@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Hi Chuck, I have had tremendous success with my design!
>
> The first iteration was for Top Band but quite scaleable up to 40 metres
> as you will see.
>
> 5 x "SFA" double loop TMLA's have now been constructed worldwide with
> repeatable results..
>
> http://members.iinet.net.au/~sadler@netspace.net.au/
>
> 73 Steve VK5SFA
>
>
>

--
73 Jordan VE7JJD

11628. (no subject)

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-15 22:30:40 UTC
From: Jordan Dobrikin
Topic: 11628 Message: 11628

Hi
Does any one have a schematic or know what's in the Controller. Is it
Varactor tuned?

TG34 INDOOR SHORTWAVE MEDIUMWAVE ACTIVE LOOP ANTENNA
Kaito KA31 Shortwave Active *Loop Antenna*
DEGEN 31MS Active *Loop Antenna*
--
73de Jordan VE7JJD

11629. Re:

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-16 04:25:09 UTC
From: jjdobrikin@...
Topic: 11628 Message: 11629

Make a Degen/Kaito "31" Loop like an almost Sony AN LP 1 Loop
http://www.ebay.com/bhp/folding-car-sun-shade
https://www.amazon.ca/iJDMTOY-33-8-Windshield-Deflector-Protection/dp/B01LBVA5OM/ref=sr_1_7?ie=UTF8&qid=1479269173&sr=8-7&keywords=windshield+reflector
Windshield Sunshade, Foldable, Block UV Ray Deflector Sun Shade Protection http://store.ijdmtoy.com/Car-Windshield-Sunshade-Foldable-Protection-p/shade-protection.htm

http://store.ijdmtoy.com/Car-Windshield-Sunshade-Foldable-Protection-p/shade-protection.htm

Windshield Sunshade, Foldable, Block UV Ray Defl... http://store.ijdmtoy.com/Car-Windshield-Sunshade-Foldable-Protection-p/shade-protection.htm This sunshade is made with high quality nylon polyester material with one silver reflective side to reflect the sunlight, which keeps your interior looking perfe...

View on store.ijdmtoy.com http://store.ijdmtoy.com/Car-Windshield-Sunshade-Foldable-Protection-p/shade-protection.htm
Preview by Yahoo

11630. Re: [loopantennas] Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-16 06:36:20 UTC
From: n7chs@...
Topic: 11622 Message: 11630

The Fractal Antenna was a great suggestion. I should have included in my original post: Have an inexpensive source for 1 inch copper pipe and 7/8 inch helical coax. Preferred bands to operate, 80 - 20 meters. The Loop calculator is also much appreciated. Is anyone aware of a web based calculator that includes two loops for radiators?

Thanks,
Chuck
N7CHS

11631. RE: [loopantennas] Dual Magnetic Loop Antenna / Fractal loop nonsense

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-17 01:00:50 UTC
From: Leigh Turner
Topic: 11622 Message: 11631

I have to laugh out loud when I see misguided designs and TMLA constructions like this! Fractal nonsense and BS! Caveat Emptor....Crazy Daisy alright; its plain loopy :-)

Concertinaing the loop radiating element like that does nothing/little to contribute to the antenna□s critically important Radiation Resistance. That key parameter is loop enclosed area based. Folding the lineal perimeter length of the loop element merely shrink compacts the antenna size by introducing additional loop inductance / XL reactance. It only allows a structural resonance to be achieved in a smaller diameter loop with a practical / convenient value tuning capacitor.

There are no free lunches here, and attempting to violate the underlying electrically-small loop antenna physics is a fruitless exercise and tantamount to folly. It will work on Rx OK, but will be a relatively wet noodle on Tx (compared to the radiated field strength achievable from a properly / optimally designed small magnetic loop antenna.

Cheers,

Leigh
VK5KLT

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, 16 November 2016 5:06 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Dual Magnetic Loop Antenna

Posted by: n7chs@...

The Fractal Antenna was a great suggestion. I should have included in my original post:

1. Have an inexpensive source for 1 inch copper pipe and 7/8 inch helical coax.
2. Preferred bands to operate, 80 - 20 meters.
The Loop calculator is also much appreciated. Is anyone aware of a web based calculator that includes two loops for radiators?

Thanks,
Chuck
N7CHS

11632. Re: [loopantennas] Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-17 02:56:51 UTC
From: Jordan Dobrikin
Topic: 11622 Message: 11632

Hi
I have been doing research for a HF SWL Receive Only loops and that is where the Fractal Loop came in to get longer wire length in a single turn. However Fractal/wire-length is only one factor in the complexity and compromise of loop designs as pointed out elsewhere in this Topic. Also your pragmatic limitation(s) of cost of material(s) puts paid to a Fractal design.

However you need to elaborate on your two coils inquiry. What are you trying to accomplish?
Two turns spiral wrap?
Two coils side by side?
Two coils one above the other?
Two coils not in the same Plane?

When push comes to shove follow the lead of the popular successful commercial Antennas no need in reinventing the wheel.
73 de Jordan ve7jjd

On Tue, Nov 15, 2016 at 10:36 PM, n7chs@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> The Fractal Antenna was a great suggestion. I should have included in my
> original post:
>
> 1. Have an inexpensive source for 1 inch copper pipe and 7/8 inch
> helical coax.
> 2. Preferred bands to operate, 80 - 20 meters.
>
> The Loop calculator is also much appreciated. Is anyone aware of a web
> based calculator that includes two loops for radiators?
>
>
> Thanks,
>
> Chuck
>
> N7CHS
>
>
>

--
73 Jordan VE7JJD

11633. Re: Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-17 04:46:25 UTC
From: silvergak@...
Topic: 11622 Message: 11633

Flat 6 cond. Telephone cable. 2 fiberglass rods from harbor freight. Makes a nice 6 turn loop. Ferrite core on one cond for coupling to coax

11634. Re: [loopantennas] Dual Magnetic Loop Antenna / Fractal loop nonsense

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-17 03:24:00 UTC
From: Jordan Dobrikin
Topic: 11622 Message: 11634

Hi
Further towards the loop material.
The corrugation gives a slightly longer length along the surface (equal diameters), theoretically speaking. However bottom line is lowest inductance/maximum surface area.
73 de Jordan ve7jjd

On Wed, Nov 16, 2016 at 5:00 PM, 'Leigh Turner' invertech@frontierisp.net.au [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
>
> I have to laugh out loud when I see misguided designs and TMLA
> constructions
> like this! Fractal nonsense and BS! Caveat Emptor....Crazy Daisy alright;
> its plain loopy :-)
>
> Concertinaing the loop radiating element like that does nothing/little to
> contribute to the antenna’s critically important Radiation Resistance. That
> key parameter is loop enclosed area based. Folding the lineal perimeter
> length of the loop element merely shrink compacts the antenna size by
> introducing additional loop inductance / XL reactance. It only allows a
> structural resonance to be achieved in a smaller diameter loop with a
> practical / convenient value tuning capacitor.
>
> There are no free lunches here, and attempting to violate the underlying
> electrically-small loop antenna physics is a fruitless exercise and
> tantamount to folly. It will work on Rx OK, but will be a relatively wet
> noodle on Tx (compared to the radiated field strength achievable from a
> properly / optimally designed small magnetic loop antenna.
>
> Cheers,
>
> Leigh
> VK5KLT
>
> _____
> From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
> Sent: Wednesday, 16 November 2016 5:06 PM
> To: loopantennas@yahoogroups.com
> Subject: Re: [loopantennas] Dual Magnetic Loop Antenna
>
> Posted by: n7chs@centurylink.net
>

> The Fractal Antenna was a great suggestion. I should have included in my
> original post:
>
> 1. Have an inexpensive source for 1 inch copper pipe and 7/8 inch helical
> coax.
> 2. Preferred bands to operate, 80 - 20 meters.
> The Loop calculator is also much appreciated. Is anyone aware of a web
> based calculator that includes two loops for radiators?
>
> Thanks,
> Chuck
> N7CHS
>
>
>

--
73 Jordan VE7JJD

11635. Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-20 00:56:05 UTC
From: n40cla@...
Topic: 11635 Message: 11635

What I am curious about in the RF PRO-1B antenna is what is inside the electrical box on the bottom of the loop itself. The reason I am interested is that I have built an octoloop for the VLF/LF range 50kHz to 500kHz. I receintly came across the bottom half of the RF PRO-1B and am curious as to how they are interfacing a piece of RG6 from the preamp to the bottom of the antenna. I thought there had to be some sort of hi impedance to low impedance transformer between the antenna and the coax. If someone has a the ability to make a photo of the inside of that box and email it to me I would appreciate it.

Thanks
Fred N4CLA

11636. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-20 01:10:07 UTC
From: Jordan Dobrikin
Topic: 11635 Message: 11636

Hi

NOT YOUR FATHER’S LOOP ANTENNA
Based
on
the
work
of
Dr
Carl
Baum
for
the
US
Air
Force
his
“
Moebius
Strip
Shielded
Magnetic
Loop
Antenna
”
architecture
outperforms
much
larger
antennas
(
see
user
reviews
on
page
1
)
Dr
Baum
was
a
Senior
Scientist
at

the
US
Air
Force
Research
Laboratory
and
is
the
recipient
of
several
awards
from
the
IEEE
(Institute
of
Electrical
and
Electronic
Engineers)
for
his
work
.
Originally
developed
for
a
classified
US
Air
Force
project
involving
the
measurement
of
EMP
(Electro
Magnetic
Pulse)
from
nuclear
weapons,
this
design
has
wide

application
to
antennas
for
low
-
noise,
interference
-
free
radio
reception
over
a
wide
frequency
range
.
Pixel
has
coupled
this
antenna
with
a
custom
made
low
-
noise
amplifier
developed
for
Pixel
by
Clifton
Laboratories
with
very
high
intermodulation
distortion
(IMD)
specifications
(OIP
3
=
+
48
dBm

,
OIP
2
>
+
100
dBm
)
that
can
operate
without
saturating
in
high
AM
and
FM
broadcast
band
signal
environments

https://www.dxengineering.com/parts/dxe-rf-pro-1b
http://www.nakatoyo.com/pixeltec/RF-PRO-1B-User-Manual.pdf
73 de Jordan ve7jjd

On Sat, Nov 19, 2016 at 4:56 PM, n40cla@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> What I am curious about in the RF PRO-1B antenna is what is inside the
> electrical box on the bottom of the loop itself. The reason I am
> interested is that I have built an octoloop for the VLF/LF range 50kHz to
> 500kHz. I receintly came across the bottom half of the RF PRO-1B and am
> curious as to how they are interfacing a piece of RG6 from the preamp to
> the bottom of the antenna. I thought there had to be some sort of hi
> impedance to low impedance transformer between the antenna and the coax.
> If someone has a the ability to make a photo of the inside of that box and
> email it to me I would appreciate it.
>
> Thanks
> Fred N4CLA
>
>
>
>

--
73 Jordan VE7JJD

11637. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-20 01:18:04 UTC
From: Jordan Dobrikin
Topic: 11635 Message: 11637

Hi
If you wind up not using it would you consider selling it?

Jordan Dobrikin
809-1850 Rosser Ave.
Burnaby BC
Canada
V5c 5E1
jjdobrikin@...

73 de Jordan ve7jjd

On Sat, Nov 19, 2016 at 5:10 PM, Jordan Dobrikin <jjdobrikin@...>
wrote:

> Hi
>
> NOT YOUR FATHER’S LOOP ANTENNA
> Based
> on
> the
> work
> of
> Dr
> Carl
> Baum
> for
> the
> US
> Air
> Force
> his
> “
> Moebius
> Strip
> Shielded
> Magnetic
> Loop
> Antenna
> ”
> architecture
> outperforms
> much
> larger
> antennas
> (

> see
> user
> reviews
> on
> page
> 1
>)
> Dr
> Baum
> was
> a
> Senior
> Scientist
> at
> the
> US
> Air
> Force
> Research
> Laboratory
> and
> is
> the
> recipient
> of
> several
> awards
> from
> the
> IEEE
> (Institute
> of
> Electrical
> and
> Electronic
> Engineers)
> for
> his
> work
> .
> Originally
> developed
> for
> a
> classified
> US
> Air
> Force
> project
> involving

> the
> measurement
> of
> EMP
> (Electro
> Magnetic
> Pulse)
> from
> nuclear
> weapons,
> this
> design
> has
> wide
> application
> to
> antennas
> for
> low
> -
> noise,
> interference
> -
> free
> radio
> reception
> over
> a
> wide
> frequency
> range
> .
> Pixel
> has
> coupled
> this
> antenna
> with
> a
> custom
> made
> low
> -
> noise
> amplifier
> developed
> for
> Pixel
> by
> Clifton

> Laboratories
> with
> very
> high
> intermodulation
> distortion
> (IMD)
> specifications
> (OIP
> 3
> =
> +
> 48
> dBm
> ,
> OIP
> 2
> >
> +
> 100
> dBm
>)
> that
> can
> operate
> without
> saturating
> in
> high
> AM
> and
> FM
> broadcast
> band
> signal
> environments
>
> https://www.dxengineering.com/parts/dxe-rf-pro-1b
> http://www.nakatoyo.com/pixeltec/RF-PRO-1B-User-Manual.pdf
> 73 de Jordan ve7jjd
>
>
> On Sat, Nov 19, 2016 at 4:56 PM, n40cla@... [loopantennas] <
> loopantennas@yahoogroups.com> wrote:
>
>>
>>
>> What I am curious about in the RF PRO-1B antenna is what is inside the
>> electrical box on the bottom of the loop itself. The reason I am
>> interested is that I have built an octoloop for the VLF/LF range 50kHz to

>> 500kHz. I receintly came across the bottom half of the RF PRO-1B and am
>> curious as to how they are interfacing a piece of RG6 from the preamp to
>> the bottom of the antenna. I thought there had to be some sort of hi
>> impedance to low impedance transformer between the antenna and the coax.
>> If someone has a the ability to make a photo of the inside of that box and
>> email it to me I would appreciate it.
>>
>> Thanks
>> Fred N4CLA
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> --
> 73 Jordan VE7JJD
>

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73 Jordan VE7JJD

11638. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-20 04:36:31 UTC
From: Steve Ratzlaff
Topic: 11635 Message: 11638

Hi Fred,

I checked mine out some years back when I first got the loop and had some intermittent problems with the loop. The box contains a 1:1 RF transformer: Mini Circuits Lab (MCL) T1-6T transformer with the center-tapped winding on the loop side and center tap to common/ground. http://www.minicircuits.com/pdfs/T1-6T-KK81.pdf

The output side (non-centertapped) has a series isolation 1 uF (plus 0.1 uF cap in parallel) cap to the output coax center connector. That's all there is, and these components are on a small PCB. (Note the loop is a "moebius" loop, thus has two turns with the connections at the top of the loop criss-crossed.)

(The RF preamp box is a 50 ohm in/out preamp with about +30 dB gain and a low noise figure--designed by Jack Smith K8ZOA (SK) who used to run Clifton Laboratories.)

(And sorry, no actual photo of the PCB/box contents.)

73,

Steve AA7U

On 11/19/2016 4:56 PM, n40cla@... [loopantennas] wrote:
>
> What I am curious about in the RF PRO-1B antenna is what is inside the
> electrical box on the bottom of the loop itself. The reason I am
> interested is that I have built an octoloop for the VLF/LF range 50kHz
> to 500kHz. I receintly came across the bottom half of the RF PRO-1B
> and am curious as to how they are interfacing a piece of RG6 from the
> preamp to the bottom of the antenna. I thought there had to be some
> sort of hi impedance to low impedance transformer between the antenna
> and the coax. If someone has a the ability to make a photo of the
> inside of that box and email it to me I would appreciate it.
>
> Thanks
> Fred N4CLA
>

11639. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-20 03:56:49 UTC
From: ferrox4@...
Topic: 11635 Message: 11639

Hi, a quick question about this loop if you don't mind me jumping in. I'm looking for a good receive antenna. How does the pixel loop pro-1b compare to the similiar wellbrook loop 1530?? Also does height matter in its placement? I have a 50 ft crank up tower I could Place the loop on, would it help vs. placing the loop At ground level? Thanks for a great thread. John

Sent from my iPhone

> On Nov 19, 2016, at 11:36 PM, "Steve Ratzlaff ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
> Hi Fred,
>
> I checked mine out some years back when I first got the loop and had some intermittent problems with the loop. The box contains a 1:1 RF transformer: Mini Circuits Lab (MCL) T1-6T transformer with the center-tapped winding on the loop side and center tap to common/ground. http://www.minicircuits.com/pdfs/T1-6T-KK81.pdf
>
> The output side (non-centertapped) has a series isolation 1 uF (plus 0.1 uF cap in parallel) cap to the output coax center connector. That's all there is, and these components are on a small PCB. (Note the loop is a "moebius" loop, thus has two turns with the connections at the top of the loop criss-crossed.)
>
> (The RF preamp box is a 50 ohm in/out preamp with about +30 dB gain and a low noise figure--designed by Jack Smith K8ZOA (SK) who used to run Clifton Laboratories.)
>
> (And sorry, no actual photo of the PCB/box contents.)
> 73,
>
> Steve AA7U
>
>> On 11/19/2016 4:56 PM, n40cla@... [loopantennas] wrote:
>>
>> What I am curious about in the RF PRO-1B antenna is what is inside the electrical box on the bottom of the loop itself. The reason I am interested is that I have built an octoloop for the VLF/LF range 50kHz to 500kHz. I receintly came across the bottom half of the RF PRO-1B and am curious as to how they are interfacing a piece of RG6 from the preamp to the bottom of the antenna. I thought there had to be some sort of hi impedance to low impedance transformer between the antenna and the coax. If someone has a the ability to make a photo of the inside of that box and email it to me I would appreciate it.
>>
>> Thanks
>> Fred N4CLA
>
>

11640. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-20 05:08:28 UTC
From: Steve Ratzlaff
Topic: 11635 Message: 11640

Hi John,

At the time I had both a Wellbrook 1530 and the Pixel loop and had them set up same height (about 6' off the ground) and near each other. They generally performed about the same. Wellbrook has a better model out now with a low noise amp (LNA model) which I would give the nod to over the Pixel (now sold by DXE).

Untuned broadband loops such as these do not need to be raised off the ground; they'll even work placed right on the ground if that's the only mounting option. Much more important is to get the loop away from anything nearby with AC power, especially if LF reception is desired. Of course if you have metal buildings nearby or homes (with all the modern RFI noise) then getting the loop away from all that would help, and might mean putting the loop higher to get out of the AC noise field.

73,

Steve

On 11/19/2016 7:56 PM, ferrox4@... [loopantennas] wrote:
> Hi, a quick question about this loop if you don't mind me jumping in.
> I'm looking for a good receive antenna. How does the pixel loop
> pro-1b compare to the similiar wellbrook loop 1530?? Also does height
> matter in its placement? I have a 50 ft crank up tower I could Place
> the loop on, would it help vs. placing the loop At ground level?
> Thanks for a great thread. John
>

11641. Re: Dual Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-18 06:15:03 UTC
From: kl7rs@...
Topic: 11622 Message: 11641

Silvergak

It would be really nice to learn more about the antenna your referencing.

11642. RE: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 13:47:55 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11635 Message: 11642
Attachments: 3 described; binary payloads are missing from this source WARC

Good morning Steve,

When you say 0.1 microfarad inparallel do you mean that the 0.1 microfarad cap is connected between the braid of the coax and the transformer??

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Saturday, November 19, 2016 11:37 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Pixel RF PRO - 1B information

Hi Fred,

I checked mine out some years back when I first got the loop and had some intermittent problems with the loop. The box contains a 1:1 RF transformer: Mini Circuits Lab (MCL) T1-6T transformer with the center-tapped winding on the loop side and center tap to common/ground. http://www.minicircuits.com/pdfs/T1-6T-KK81.pdf

The output side (non-centertapped) has a series isolation 1 uF (plus 0.1 uF cap in parallel) cap to the output coax center connector. That's all there is, and these components are on a small PCB. (Note the loop is a "moebius" loop, thus has two turns with the connections at the top of the loop criss-crossed.)

(The RF preamp box is a 50 ohm in/out preamp with about +30 dB gain and a low noise figure--designed by Jack Smith K8ZOA (SK) who used to run Clifton Laboratories.)

(And sorry, no actual photo of the PCB/box contents.)

73,

Steve AA7U

On 11/19/2016 4:56 PM, n40cla@gmail.com<mailto:n40cla@gmail.com> [loopantennas] wrote:

What I am curious about in the RF PRO-1B antenna is what is inside the electrical box on the bottom of the loop itself. The reason I am interested is that I have built an octoloop for the VLF/LF range 50kHz to 500kHz. I receintly came across the bottom half of the RF PRO-1B and am curious as to how they are interfacing a piece of RG6 from the preamp to the bottom of the antenna. I thought there had to be some sort of hi impedance to low impedance transformer between the antenna and the coax. If someone has a the ability to make a photo of the inside of that box and email it to me I would appreciate it.

Thanks
Fred N4CLA

11643. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 14:55:17 UTC
From: Steve Ratzlaff
Topic: 11635 Message: 11643

No. The cap is in series between the coax connector center pin and one transformer wire (with other transformer wire to common/ground).

Steve

On 11/21/2016 6:47 AM, 'Jef Verborgt, Contractor, Code 6138' jozef.verborgt.ctr@... [loopantennas] wrote:
>
> Good morning Steve,
>
> When you say 0.1 microfarad inparallel do you mean that the 0.1
> microfarad cap is connected between the braid of the coax and the
> transformer??
>
> Jef
>
>
> The output side (non-centertapped) has a series isolation 1 uF (plus
> 0.1 uF cap in parallel) cap to the output coax center connector.
> That's all there is, and these components are on a small PCB. (Note
> the loop is a "moebius" loop, thus has two turns with the connections
> at the top of the loop criss-crossed.)
>
>

11644. RE: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 15:12:34 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11635 Message: 11644
Attachments: 3 described; binary payloads are missing from this source WARC

Morning Steve,

Thanks for you quick reply. So the two capacitors are just in parallel with each other and both connect the same side of the transformer to the center of the coax?
I really wonder why or what this might bring to the table?

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Monday, November 21, 2016 9:55 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Pixel RF PRO - 1B information

No. The cap is in series between the coax connector center pin and one transformer wire (with other transformer wire to common/ground).

Steve

On 11/21/2016 6:47 AM, 'Jef Verborgt, Contractor, Code 6138' jozef.verborgt.ctr@nrl.navy.mil<mailto:jozef.verborgt.ctr@nrl.navy.mil> [loopantennas] wrote:

Good morning Steve,

When you say 0.1 microfarad inparallel do you mean that the 0.1 microfarad cap is connected between the braid of the coax and the transformer??

Jef

The output side (non-centertapped) has a series isolation 1 uF (plus 0.1 uF cap in parallel) cap to the output coax center connector. That's all there is, and these components are on a small PCB. (Note the loop is a "moebius" loop, thus has two turns with the connections at the top of the loop criss-crossed.)

11645. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 15:25:10 UTC
From: Richard (Rick) Karlquist
Topic: 11635 Message: 11645

I bought one of these for evaluation. An ordinary
10 foot circumference loop is 1/3 wavelength at
30 MHz. It goes resonant at 1/2 wavelength. That
is the basic concept of the Wellbrook loop, etc.
If the loop is "shielded" and has a dielectric
other than air, the loop may reach resonance before
it gets to 30 MHz. At resonance, there is a suck
out in response.

The Pixel loop has essentially two turns. This reduces
the half wave resonance to around 10 or 15 MHz including
the effect of the dielectric. On a network analyzer,
the impedance circles around the Smith chart as expected.
IMHO, regardless of the original top secret EMP design
(it might have been good for EMP) this makes no sense.
The loop does still work after a fashion in spite of this.

They ship a very nice Clifton Labs preamp in a weatherproof
box with it. This is the best part. I use the preamp with other
antennas I am experimenting with. The loop sits mainly unused.

Rick N6RK

On 11/19/2016 4:56 PM, n40cla@... [loopantennas] wrote:
>
>
> What I am curious about in the RF PRO-1B antenna is what is inside the
> electrical box on the bottom of the loop itself. The reason I am
> interested is that I have built an octoloop for the VLF/LF range 50kHz
> to 500kHz. I receintly came across the bottom half of the RF PRO-1B and
> am curious as to how they are interfacing a piece of RG6 from the preamp
> to the bottom of the antenna. I thought there had to be some sort of hi
> impedance to low impedance transformer between the antenna and the
> coax. If someone has a the ability to make a photo of the inside of
> that box and email it to me I would appreciate it.
>
> Thanks
> Fred N4CLA
>
>
>

11646. Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 15:35:17 UTC
From: Scott Yost
Topic: 11635 Message: 11646

I have had a Pixel RF PRO - 1B since 2012. It's an excellent performer and a great addition the antenna farm. But it doesn't replace everything else.

For example, compared to my active whip it ran out of gas in the lower third of the MW BCB.

I mentioned this to Pixel and they provided an outboard preamplifier that brought the loop to parity with my active whip antenna. Very much appreciated that as I wanted to use the loop in the MW BCB for both its lower noise pick-up property, and it's directional nature.

But even with the outboard preamp below about 250 Kc's it once again runs out of gas. The active whip far outperforms it below that frequency. It's advertised as usable to 50 Kc's but I find that highly unrealistic.

Mechanically it has been very sound, surviving an 80 mile-per-hour wind in 2015.

I temporarily mounted mine on a tripod and tested it in several locations around my yard and on the roof of my house. It ended up going on a gable end of the roof because of better signal strength and less noise pickup.

So my experience after 4 years is it is my go-to antenna for everything from the NDB band, upward.

If you want to listen to LWBC or any of the military VLF utility stations or try to hear the Alpha's you'll need an active whip in addition to the loop. For BCB and SW the loop is the ticket with its comparable signal strength, and much lower noise.

Scott
Michigan

11647. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 15:59:06 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11647

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Pixel RF Pro-1 Moebius Loop Diagram.jpg
Uploaded by : steveratz <ratzlaffsteve@...>
Description : Pixel RF Pro-1 Moebius Loop Diagram

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/Pixel%20RF%20Pro-1%20Moebius%20Loop%20Diagram.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

steveratz <ratzlaffsteve@...>

11648. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 16:03:21 UTC
From: Steve Ratzlaff
Topic: 11635 Message: 11648

I have just uploaded a drawing of the loop and output transformer to the Files. I'm guessing the isolation capacitor is to give protection for the power inserter should the user accidentally hook the coax cable back to the power inserter directly to the loop instead of to the preamp.

Steve

11649. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 20:02:36 UTC
From: Jordan Dobrikin
Topic: 11635 Message: 11649

Hi
Since you guys know what's going in the Pixel and possibly the Wellbrook
can you explain where the resonating capacitance is?
73 de Jordan ve7jjd

On Mon, Nov 21, 2016 at 8:03 AM, Steve Ratzlaff ratzlaffsteve@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> I have just uploaded a drawing of the loop and output transformer to the
> Files. I'm guessing the isolation capacitor is to give protection for
> the power inserter should the user accidentally hook the coax cable back
> to the power inserter directly to the loop instead of to the preamp.
>
> Steve
>
>
>

--
73 Jordan VE7JJD

11650. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 20:40:27 UTC
From: crabtreejr@...
Topic: 11635 Message: 11650

The Pixel and Wellbrook are broadband loops, and there is no resonating capacitor. See:
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11401
and work from there.

73 John KC0G

-----Original Message-----
From: Jordan Dobrikin jjdobrikin@... [loopantennas]
Sent: Mon, Nov 21, 2016 2:10 pm

Hi
Since you guys know what's going in the Pixel and possibly the Wellbrook can you explain where the resonating capacitance is?
73 de Jordan ve7jjd

On Mon, Nov 21, 2016 at 8:03 AM, Steve Ratzlaff ratzlaffsteve@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

I have just uploaded a drawing of the loop and output transformer to the Files. I'm guessing the isolation capacitor is to give protection for the power inserter should the user accidentally hook the coax cable back to the power inserter directly to the loop instead of to the preamp.

Steve

--

73 Jordan VE7JJD

11651. RE: [loopantennas] New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-21 21:13:55 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 238 Message: 11651

Good afternoon Steve,

I think I understand how the connection is made but I can’t access the file at the URL below.

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Monday, November 21, 2016 10:59 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] New file uploaded to loopantennas

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Pixel RF Pro-1 Moebius Loop Diagram.jpg
Uploaded by : steveratz <ratzlaffsteve@gmail.com<mailto:ratzlaffsteve@gmail.com>>
Description : Pixel RF Pro-1 Moebius Loop Diagram

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/Pixel%20RF%20Pro-1%20Moebius%20Loop%20Diagram.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

steveratz <ratzlaffsteve@gmail.com<mailto:ratzlaffsteve@gmail.com>>

11652. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 18:12:56 UTC
From: J Ferrow
Topic: 11635 Message: 11652

hi Steve thanks for that. how would the Wellbrook or Pixel loops compare with a ferrite sleeve loop?? Obviously the Wellbrook and Pixel loops are broadbanded when it comes to tuning, but i've been reading a bit about ferrite sleeve loops and they seem pretty amazing even though you can only tune one frequency at a time. is there anyway to make a FSL broadbanded when it comes to tuning like the wellbrook or Pixel loop and have you ever built one?? One in particular i've been reading about by Gary deBouk has 108 ferrite rods. I would like to try and build sometghiung like this for LW and MW, is it worth it??

Thanks again, John

On Saturday, November 19, 2016 11:08 PM, "Steve Ratzlaff ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  Hi John, At the time I had both a Wellbrook 1530 and the Pixel loop and had them set up same height (about 6' off the ground) and near each other. They generally performed about the same. Wellbrook has a better model out now with a low noise amp (LNA model) which I would give the nod to over the Pixel (now sold by DXE). Untuned broadband loops such as these do not need to be raised off the ground; they'll even work placed right on the ground if that's the only mounting option. Much more important is to get the loop away from anything nearby with AC power, especially if LF reception is desired. Of course if you have metal buildings nearby or homes (with all the modern RFI noise) then getting the loop away from all that would help, and might mean putting the loop higher to get out of the AC noise field. 73, Steve

On 11/19/2016 7:56 PM, ferrox4@... [loopantennas] wrote:

  Hi, a quick question about this loop if you don't mind me jumping in. I'm looking for a good receive antenna. How does the pixel loop pro-1b compare to the similiar wellbrook loop 1530?? Also does height matter in its placement? I have a 50 ft crank up tower I could Place the loop on, would it help vs. placing the loop At ground level? Thanks for a great thread. John

11653. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 19:10:53 UTC
From: Everett Sharp
Topic: 11635 Message: 11653

Hi John,

If you you are interested in a Ferrite Sleeve Loop I have two that are 7.5" X 7.5" and are for sale. If interested just email me at everettsharp@....

Everett N4CY

Sent from my iPad

> On Nov 22, 2016, at 12:12 PM, J Ferrow ferrox4@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> hi Steve thanks for that. how would the Wellbrook or Pixel loops compare with a ferrite sleeve loop?? Obviously the Wellbrook and Pixel loops are broadbanded when it comes to tuning, but i've been reading a bit about ferrite sleeve loops and they seem pretty amazing even though you can only tune one frequency at a time. is there anyway to make a FSL broadbanded when it comes to tuning like the wellbrook or Pixel loop and have you ever built one?? One in particular i've been reading about by Gary deBouk has 108 ferrite rods. I would like to try and build sometghiung like this for LW and MW, is it worth it??
>
> Thanks again, John
>
>
> On Saturday, November 19, 2016 11:08 PM, "Steve Ratzlaff ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>
>
>
> Hi John,
> At the time I had both a Wellbrook 1530 and the Pixel loop and had them set up same height (about 6' off the ground) and near each other. They generally performed about the same. Wellbrook has a better model out now with a low noise amp (LNA model) which I would give the nod to over the Pixel (now sold by DXE).
> Untuned broadband loops such as these do not need to be raised off the ground; they'll even work placed right on the ground if that's the only mounting option. Much more important is to get the loop away from anything nearby with AC power, especially if LF reception is desired. Of course if you have metal buildings nearby or homes (with all the modern RFI noise) then getting the loop away from all that would help, and might mean putting the loop higher to get out of the AC noise field.
> 73,
> Steve
>
>> On 11/19/2016 7:56 PM, ferrox4@... [loopantennas] wrote:
>>
>> Hi, a quick question about this loop if you don't mind me jumping in. I'm looking for a good receive antenna. How does the pixel loop pro-1b compare to the similiar wellbrook loop

1530?? Also does height matter in its placement? I have a 50 ft crank up tower I could Place the loop on, would it help vs. placing the loop At ground level? Thanks for a great thread. John
>>
>
>
>
>

11654. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 19:50:57 UTC
From: Jordan Dobrikin
Topic: 11635 Message: 11654

Hi
Two questions.

Is there such a thing as a Ferrite HF/SWL Antenna?

How would a Pixel and Wellbrook fare against a Varactor tuned Loop, one turn, 4 foot diameter HF/SWL Loop?
73 de Jordan ve7jjd

On Tue, Nov 22, 2016 at 11:10 AM, Everett Sharp everettsharp@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Hi John,
>
> If you you are interested in a Ferrite Sleeve Loop I have two that are
> 7.5" X 7.5" and are for sale. If interested just email me at
> everettsharp@....
>
> Everett N4CY
>
> Sent from my iPad
>
> On Nov 22, 2016, at 12:12 PM, J Ferrow ferrox4@... [loopantennas] <
> loopantennas@yahoogroups.com> wrote:
>
>
>
> hi Steve thanks for that. how would the Wellbrook or Pixel loops compare
> with a ferrite sleeve loop?? Obviously the Wellbrook and Pixel loops are
> broadbanded when it comes to tuning, but i've been reading a bit about
> ferrite sleeve loops and they seem pretty amazing even though you can only
> tune one frequency at a time. is there anyway to make a FSL broadbanded
> when it comes to tuning like the wellbrook or Pixel loop and have you ever
> built one?? One in particular i've been reading about by Gary deBouk has
> 108 ferrite rods. I would like to try and build sometghiung like this for
> LW and MW, is it worth it??
>
> Thanks again, John
>
>
> On Saturday, November 19, 2016 11:08 PM, "Steve Ratzlaff
> ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com>
> wrote:
>

>
>
> Hi John,
> At the time I had both a Wellbrook 1530 and the Pixel loop and had them
> set up same height (about 6' off the ground) and near each other. They
> generally performed about the same. Wellbrook has a better model out now
> with a low noise amp (LNA model) which I would give the nod to over the
> Pixel (now sold by DXE).
> Untuned broadband loops such as these do not need to be raised off the
> ground; they'll even work placed right on the ground if that's the only
> mounting option. Much more important is to get the loop away from anything
> nearby with AC power, especially if LF reception is desired. Of course if
> you have metal buildings nearby or homes (with all the modern RFI noise)
> then getting the loop away from all that would help, and might mean putting
> the loop higher to get out of the AC noise field.
> 73,
> Steve
>
> On 11/19/2016 7:56 PM, ferrox4@... [loopantennas] wrote:
>
>
> Hi, a quick question about this loop if you don't mind me jumping in. I'm
> looking for a good receive antenna. How does the pixel loop pro-1b compare
> to the similiar wellbrook loop 1530?? Also does height matter in its
> placement? I have a 50 ft crank up tower I could Place the loop on, would
> it help vs. placing the loop At ground level? Thanks for a great thread.
> John
>
>
>
>
>
>

--
73 Jordan VE7JJD

11655. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 19:56:43 UTC
From: Everettsharp
Topic: 11635 Message: 11655

I have been able to tune up a little over 10 MHz with a Ferrite Loop after that capacitance limits the top end.

Everett N4CY

Sent from my iPhone

> On Nov 22, 2016, at 1:50 PM, Jordan Dobrikin jjdobrikin@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Hi
> Two questions.
>
> Is there such a thing as a Ferrite HF/SWL Antenna?
>
> How would a Pixel and Wellbrook fare against a Varactor tuned Loop, one turn, 4 foot diameter HF/SWL Loop?
> 73 de Jordan ve7jjd
>
>> On Tue, Nov 22, 2016 at 11:10 AM, Everett Sharp everettsharp@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>>
>> Hi John,
>>
>> If you you are interested in a Ferrite Sleeve Loop I have two that are 7.5" X 7.5" and are for sale. If interested just email me at everettsharp@....
>>
>> Everett N4CY
>>
>> Sent from my iPad
>>
>>> On Nov 22, 2016, at 12:12 PM, J Ferrow ferrox4@...m [loopantennas] <loopantennas@yahoogroups.com> wrote:
>>>
>>>
>>> hi Steve thanks for that. how would the Wellbrook or Pixel loops compare with a ferrite sleeve loop?? Obviously the Wellbrook and Pixel loops are broadbanded when it comes to tuning, but i've been reading a bit about ferrite sleeve loops and they seem pretty amazing even though you can only tune one frequency at a time. is there anyway to make a FSL broadbanded when it comes to tuning like the wellbrook or Pixel loop and have you ever built one?? One in particular i've been reading about by Gary deBouk has 108 ferrite rods. I would like to try and build sometghiung like this for LW and MW, is it worth it??
>>>
>>> Thanks again, John
>>>
>>>

>>> On Saturday, November 19, 2016 11:08 PM, "Steve Ratzlaff ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:
>>>
>>>
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>>> Hi John,
>>> At the time I had both a Wellbrook 1530 and the Pixel loop and had them set up same height (about 6' off the ground) and near each other. They generally performed about the same. Wellbrook has a better model out now with a low noise amp (LNA model) which I would give the nod to over the Pixel (now sold by DXE).
>>> Untuned broadband loops such as these do not need to be raised off the ground; they'll even work placed right on the ground if that's the only mounting option. Much more important is to get the loop away from anything nearby with AC power, especially if LF reception is desired. Of course if you have metal buildings nearby or homes (with all the modern RFI noise) then getting the loop away from all that would help, and might mean putting the loop higher to get out of the AC noise field.
>>> 73,
>>> Steve
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>>>> On 11/19/2016 7:56 PM, ferrox4@... [loopantennas] wrote:
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>>>>
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> --
> 73 Jordan VE7JJD
>

11656. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 20:10:10 UTC
From: Jordan Dobrikin
Topic: 11635 Message: 11656

Hi
Thanks for the timely response.
Please a little more info on the detail(s) of said Loop(s).
73 de Jordan ve7jjd

On Tue, Nov 22, 2016 at 11:56 AM, Everettsharp everettsharp@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> I have been able to tune up a little over 10 MHz with a Ferrite Loop after
> that capacitance limits the top end.
>
> Everett N4CY
>
> Sent from my iPhone
>
> On Nov 22, 2016, at 1:50 PM, Jordan Dobrikin jjdobrikin@...
> [loopantennas] <loopantennas@yahoogroups.com> wrote:
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> Hi
> Two questions.
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> Is there such a thing as a Ferrite HF/SWL Antenna?
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>> 108 ferrite rods. I would like to try and build sometghiung like this for
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>> Thanks again, John
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>> On Saturday, November 19, 2016 11:08 PM, "Steve Ratzlaff
>> ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com>
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>> John

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> --
> 73 Jordan VE7JJD
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73 Jordan VE7JJD
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11657. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 21:23:38 UTC
From: Andrew Ikin
Topic: 11635 Message: 11657

John,

A none resonant FSL may have a a reasonable impedance match to the Wellbrook Flag amplifier; the FLG100LN (Serial No. 200 onwards) which has an approx. 800 Ohm input z. However, the input matching transformer may degrade the amp. NF of 0.11dB to approx. 0.3dB. Its hard to say whether the sensitivity of the broadband FSL would be as good and the tuned version.

73

Andrew

From: J Ferrow ferrox4@... [loopantennas]
Sent: Tuesday, 22 November, 2016 6:12 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Pixel RF PRO - 1B information

hi Steve thanks for that. how would the Wellbrook or Pixel loops compare with a ferrite sleeve loop?? Obviously the Wellbrook and Pixel loops are broadbanded when it comes to tuning, but i've been reading a bit about ferrite sleeve loops and they seem pretty amazing even though you can only tune one frequency at a time. is there anyway to make a FSL broadbanded when it comes to tuning like the wellbrook or Pixel loop and have you ever built one?? One in particular i've been reading about by Gary deBouk has 108 ferrite rods. I would like to try and build sometghiung like this for LW and MW, is it worth it??

Thanks again, John

On Saturday, November 19, 2016 11:08 PM, "Steve Ratzlaff ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

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At the time I had both a Wellbrook 1530 and the Pixel loop and had them set up same height (about 6' off the ground) and near each other. They generally performed about the same. Wellbrook has a better model out now with a low noise amp (LNA model) which I would give the nod to over the Pixel (now sold by DXE).
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73,
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11658. RE: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 21:45:40 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11635 Message: 11658
Attachments: 3 described; binary payloads are missing from this source WARC

Andrew,

It is stated that " the FLG100LN uses 4 JFETS in parallel push pull, cascode with optimum noise-less transformer feed back". While I understand (or at least I think I do) every word of this sentence I still have trouble to understand the concept. A push pull requires two Jfets and a push pull cascode requires another two Jfets which is a total of four. If you use parallel Jfets the total would go up to six or even eight Jfets…. So what I am missing here? I do understand the concept of noise-less feedback. Are you willing to enlighten us a bit on this issue?

Best regards,

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Tuesday, November 22, 2016 4:24 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Pixel RF PRO - 1B information

John,

A none resonant FSL may have a a reasonable impedance match to the Wellbrook Flag amplifier; the FLG100LN (Serial No. 200 onwards) which has an approx. 800 Ohm input z. However, the input matching transformer may degrade the amp. NF of 0.11dB to approx. 0.3dB. Its hard to say whether the sensitivity of the broadband FSL would be as good and the tuned version.

73

Andrew

From: J Ferrow ferrox4@yahoo.com [loopantennas]
Sent: Tuesday, 22 November, 2016 6:12 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Pixel RF PRO - 1B information

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Thanks again, John

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Untuned broadband loops such as these do not need to be raised off the ground; they'll even work placed right on the ground if that's the only mounting option. Much more important is to get the loop away from anything nearby with AC power, especially if LF reception is desired. Of course if you have metal buildings nearby or homes (with all the modern RFI noise) then getting the loop away from all that would help, and might mean putting the loop higher to get out of the AC noise field.
73,
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11659. HF/SWL Ferrite Loop Antenna(s)

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 22:49:26 UTC
From: jjdobrikin@...
Topic: 11659 Message: 11659

Hi
Starting a new topic as opposed to piggybacking on the Pixel Wellbrook topic.
I am looking for advice and design(s) for HF/SWL ferrite loop antennas.
Thanx
73 de Jordan ve7jjd

11660. Re: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-22 23:16:09 UTC
From: Andrew Ikin
Topic: 11635 Message: 11660

Jef,

Each side of the push-pull amp. (ALA100LN and FLG100LN)uses 2 JFETs in parallel, The upper half of each push-pull cascode is a single 2N4401 (Now obsolete On-Semi Device). Using an On-semi device 2N4401 in this configuration as apposed to a JFET significantly reduces the IMD. Other makes of the 2N4401 are not as linear!

The ALA1530LN/P has 4 extra Jfets to increase the gain and reduce the NF to 0.07dB. Or put it another way, the amp. noise floor is 18dB lower compared to the thermal resistor noise at 290K. This low noise may appear to be an overkill, but it is still noticeable when comparing it to the ALA1530S+ with its 0.45dB NF (noise floor is 10dB lower compared to the thermal resistor noise at 290K.)

73

Andrew

From: 'Jef Verborgt, Contractor, Code 6138' jozef.verborgt.ctr@... [loopantennas]
Sent: Tuesday, 22 November, 2016 9:45 PM
To: loopantennas@yahoogroups.com
Subject: RE: [loopantennas] Pixel RF PRO - 1B information

Andrew,

It is stated that " the FLG100LN uses 4 JFETS in parallel push pull, cascode with optimum noise-less transformer feed back". While I understand (or at least I think I do) every word of this sentence I still have trouble to understand the concept. A push pull requires two Jfets and a push pull cascode requires another two Jfets which is a total of four. If you use parallel Jfets the total would go up to six or even eight Jfets…. So what I am missing here? I do understand the concept of noise-less feedback. Are you willing to enlighten us a bit on this issue?

Best regards,

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Tuesday, November 22, 2016 4:24 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Pixel RF PRO - 1B information

John,

A none resonant FSL may have a a reasonable impedance match to the Wellbrook Flag amplifier; the FLG100LN (Serial No. 200 onwards) which has an approx. 800 Ohm input z. However, the input matching transformer may degrade the amp. NF of 0.11dB to approx. 0.3dB.

Its hard to say whether the sensitivity of the broadband FSL would be as good and the tuned version.

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Andrew

From: J Ferrow ferrox4@... [loopantennas]

Sent: Tuesday, 22 November, 2016 6:12 PM

To: loopantennas@yahoogroups.com

Subject: Re: [loopantennas] Pixel RF PRO - 1B information

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Thanks again, John

On Saturday, November 19, 2016 11:08 PM, "Steve Ratzlaff ratzlaffsteve@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Hi John,

At the time I had both a Wellbrook 1530 and the Pixel loop and had them set up same height (about 6' off the ground) and near each other. They generally performed about the same. Wellbrook has a better model out now with a low noise amp (LNA model) which I would give the nod to over the Pixel (now sold by DXE).

Untuned broadband loops such as these do not need to be raised off the ground; they'll even work placed right on the ground if that's the only mounting option. Much more important is to get the loop away from anything nearby with AC power, especially if LF reception is desired. Of course if you have metal buildings nearby or homes (with all the modern RFI noise) then getting the loop away from all that would help, and might mean putting the loop higher to get out of the AC noise field.

73,

Steve

On 11/19/2016 7:56 PM, ferrox4@... [loopantennas] wrote:

Hi, a quick question about this loop if you don't mind me jumping in. I'm looking for a good receive antenna. How does the pixel loop pro-1b compare to the similiar wellbrook loop 1530?? Also does height matter in its placement? I have a 50 ft crank up tower I could Place the loop on, would it help vs. placing the loop At ground level? Thanks for a great thread. John

11661. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-23 12:07:53 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11661

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /A Practical Approach to Building a Broadband Active Loop.pdf
Uploaded by : everettsharp74 <everettsharp@...>
Description : A Practical Approach to building and Evaluating a Broadband Active Loop
Antenna

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/A%20Practical%20Approach%20to%20Building%20a%20Broadband%20Active%20Loop.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

everettsharp74 <everettsharp@...>

11662. RE: [loopantennas] Pixel RF PRO - 1B information

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-23 12:10:11 UTC
From: Jef Verborgt, Contractor, Code 6138
Topic: 11635 Message: 11662

Good afternoon Andy,

Fully understood now and yes I really do like the 2N4401 so some years ago I did buy a full reel of them which will last me a life time….
Somewhere I still have some push pull cascode amplifiers but with single J310 on each side followed by a 2N4401. I will do some digging tonight and try them out on my attic flag antenna.

I also had very good luck with two 2N5109 transistors in a push pull configuration as emitter followers. The noise figure will be a lot worse than your concoction but it seems to work very well on small loops with a termination resistor of some 500-1000 ohms. The results are actually very impressive on the 27 and 28 mhz bands where my loop is close(r) to resonance.

Thanks again for your explanation,

Jef

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Tuesday, November 22, 2016 6:16 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Pixel RF PRO - 1B information

Jef,

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From: 'Jef Verborgt, Contractor, Code 6138'
jozef.verborgt.ctr@nrl.navy.mil<mailto:jozef.verborgt.ctr@nrl.navy.mil> [loopantennas]
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Subject: Re: [loopantennas] Pixel RF PRO - 1B information

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11663. McKay DA 100 Control Schematic??

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-26 18:55:13 UTC
From: Jordan Dobrikin
Topic: 11663 Message: 11663

Hi
Does any one have a Schematic of the Stoner McKay Dymek DA 100 D &/or E
Active Antenna *Control* Unit?
I am trying to use it to control a Magnetic Loop Antenna preamplifier.
DC board power & 6 to 30 volts for Varactor tuning.
73 de Jordan VE7JJD

11664. HF FSL Loop Antenna???

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-11-30 22:22:04 UTC
From: jjdobrikin@...
Topic: 11664 Message: 11664

Hi
Is there such a thing as a High Frequency Short Wave FSL Loop?
73 de Jordan ve7jjd

11665. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-01 14:05:23 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11665

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11666. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-01 14:05:23 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11666

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11667. HF Loop Hack

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-02 03:29:23 UTC
From: Jordan Dobrikin
Topic: 11667 Message: 11667

Hi
Looking for suggestions on hacking this FM Antenna into a HF SWL receive
only loop antenna??

I have some varactor tuned preamps.

Hula Loop Preamp

http://www.ebay.com/itm/321928161314?_trksid=p2055119.m1438.l2649&ssPageName=STRK%3AMEBIDX
%3AIT

-
[image:
Magnetic-Active-HF-Antenna-Kit-PCB-3MHz-30MHz-for-Hula-Loop-Shortwave-Radio]
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[image:
Magnetic-Active-HF-Antenna-Kit-PCB-3MHz-30MHz-for-Hula-Loop-Shortwave-Radio]

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http://dl2kq.de/ant/3-96.htm

усилителя показана на следующем рисунке. Черным цветом на ней показаны
элементы, устанавливаемые в любом случае, красным - только при работе с
ферритовой магнитной антенной, зеленым – только при работе с рамкой.

Коэффициент усиления (в данном случае он равен 30) по напряжению задается
отношением резисторов R7/R6. Эти резисторы никак не влияют на входной
импеданс по рабочим входам (выводы 1 и 8 микросхемы

---

http://www.ebay.com/itm/322074792593?_trksid=p2055119.m1438.l2649&ssPageName=STRK%3AMEBIDX
%3AIT

-
[image:
Outdoor-FM-Omni-Loop-Antenna-FM-Receive-Antenna-High-Performance-FM-Antenna]

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Outdoor-FM-Omni-Loop-Antenna-FM-Receive-Antenna-High-Performance-FM-Antenna]

Have one to sell? Sell now
<http://cgi5.ebay.com/ws/eBayISAPI.dll?SellLikeItem&item=322074792593&rt=nc&_trksid=p2047675.l2567>

11668. yes, a High power loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-02 03:56:17 UTC
From: kf4dcy@...
Topic: 11668 Message: 11668

Has anyone made a high power legal limit mag loop antenna? If so what voltage cap does it take. My plans are to build a big 160 meter loop and vary it with an adjustable slide plate cap with dielectric polyethylene laminated plates. And the sliders coming uncoupled about an 1/8 inch, the lamination will assure a recoupling. This so the pf will fall off to even lower pf figures. Using a rack and pinion to drive the variability. And a ho scale train transformer to vary the speed of a dc powered drill motor and reduction gearing. And a double pole double throw switch to reverse 'in' from 'out'.

11669. Re: [loopantennas] yes, a High power loop question

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-04 04:34:51 UTC
From: Dick Bingham
Topic: 11668 Message: 11669

Hello kf4dcy <kf4dcy@...>

Check this out for info on HIGH POWER TX Loop antenna design ===>

*http://brisdance.com/vk4amz/LOOP.html
<http://brisdance.com/vk4amz/LOOP.html>*

*http://www.66pacific.com/calculators/small_tx_loop_calc.aspx
<http://www.66pacific.com/calculators/small_tx_loop_calc.aspx>*

pretty much ALL you need to know about building a 160-meter
HP TX-Loop . . . .

73 Dick w7wkr CN97uj

On Thu, Dec 1, 2016 at 7:56 PM, kf4dcy@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Has anyone made a high power legal limit mag loop antenna? If so what
> voltage cap does it take. My plans are to build a big 160 meter loop and
> vary it with an adjustable slide plate cap with dielectric polyethylene
> laminated plates. And the sliders coming uncoupled about an 1/8 inch, the
> lamination will assure a recoupling. This so the pf will fall off to even
> lower pf figures. Using a rack and pinion to drive the variability. And a
> ho scale train transformer to vary the speed of a dc powered drill motor
> and reduction gearing. And a double pole double throw switch to reverse
> 'in' from 'out'.
>
>
>

11670. how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-06 23:02:15 UTC
From: J Ferrow
Topic: 11670 Message: 11670

Hi, How does one feed the output of a tuned loop to a radio that doesn't have a built in ferrrite stick??

also how far away can the tuning capacitor be from the tuned loop for it to work? is there any way i could place a LW loop outside and tune it with a variable air core cap at my desktop where my radio is?? Is this possible??

Thank-You, John

11671. Re: [loopantennas] how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-06 23:38:37 UTC
From: Jordan Dobrikin
Topic: 11670 Message: 11671

Hi
Will need more info to give a complete answer.

Does the Radio allow connection to an external Antenna? Does the Radio have a Whip Antenna?

Are you talking about an existing Loop Antenna? If so please describe.

Remote operation of a Loop Antenna is usually done with a Varactor Tuned Low noise amplifier, sometimes with an untuned broad band amplifier .

Take a look at the Addawards which claims to add LW that it's kissin cousins Degen & Kaito do not have.

"There is a new, re-designed antenna that was based off the TG34 (and KA33 – no longer in production). Since I wrote this Guest Post, I have ordered the ADDWARDS A38-LMS from Anon Co. in China. The A38-LMS is said to have more durable (thicker) wires than the TG34, it now has a dial to control “Gain” and the bands are now separated in three vice two (LW, MW, SW switch). Since I really like the TG34, I’m very hopeful this new A38-LMS is even better."

73 de Jordan ve7jjd

On Tue, Dec 6, 2016 at 3:02 PM, J Ferrow ferrox4@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Hi, How does one feed the output of a tuned loop to a radio that doesn't
> have a built in ferrrite stick??
>
> also how far away can the tuning capacitor be from the tuned loop for it
> to work? is there any way i could place a LW loop outside and tune it with
> a variable air core cap at my desktop where my radio is?? Is this possible??
>
> Thank-You, John
>
>
>

--
73 Jordan VE7JJD

11672. Addaware A38-LMS Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-07 00:33:21 UTC
From: Jordan Dobrikin
Topic: 11672 Message: 11672

Hi
Does anyone have Schematics and/or know what is going on with the switch on the Antenna Module?
What is it switching, Loops or an inductor??
73 de Jordan ve7jjd

Addaware vs et.al.
From SWL Post:
"There is a new, re-designed antenna that was based off the TG34 (and KA33, no longer in production). Since I wrote this Guest Post, I have ordered the Addaware A38-LMS from Anon Co. in China. The A38-LMS is said to have more durable (thicker) wires than the TG34, it now has a dial to control “Gain” and the bands are now separated in three vice two (LW, MW, SW switch). Since I really like the TG34, I’m hopeful this new A38-LMS is even better.
The best deal is the Degen DE31MS, Kaito KA33, TG34, Kestrel W31MS. These are all the same antennas, under different name brands and models. It's an active MW/SW loop. It's a winner."
--
73 de Jordan VE7JJD

11673. HF/SWL Ferrite Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-07 01:11:36 UTC
From: Jordan Dobrikin
Topic: 11673 Message: 11673

Hi
I am seeking advice assistance and comment.
I am trying to design and build a HF/SWl Ferrite Loopstick Antenna, for use in retrofitting Radios and the C.Crane Twin Coil Antenna.
It is my understanding that I should use heavier gage wire, wound evenly spaced on a *long ferrite rod* to get low inductance with maximum surface area. Litz apparrently poops out above 2 MHz.
Plan A would have a plug connector on the loop assembly to plug into a radio's external antenna jack.
Plan B would be to open the Radio and connect the new antenna in parallel with the existing Loop antenna or to bypass the existing loop antenna.
With respect to the C.Crane a similar plan of attack; opening the Antenna Module to access the existing coil connection to the amplifier.
73 de Jordan ve7jjd

11674. Addwards A38LMS vs.Degen Kaito Loop Antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-07 01:20:36 UTC
From: Jordan Dobrikin
Topic: 11674 Message: 11674

Hi
More info.

http://www.ebay.it/itm/A38LMS-Addwards-Soft-Loop-Antenna-AM-MW-LW-SW-Longwave-/322246473440?hash=item4b0762f6e0:g:0HwAAOSwFdtXxl4t

http://swldx.tumblr.com/post/153362416222/degen-de31-kaito-ka31
--
73 Jordan VE7JJD

11675. Re: [loopantennas] how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-07 03:29:06 UTC
From: BobC
Topic: 11670 Message: 11675

The unavoidable component when coupling a tuned loop to a receiver, regardless of whether it is going to a ferrite antenna core or to some other input circuit is the lead-in or transmission line. This will necessarily be low impedance - on the order of 50 to 100 ohms. So the output of the tuned loop must match this as closely as possible.

At resonance a tuned loop having the capacitor and coil in series with lead-in will produce the necessary low impedance. That would be the simplest way to solve the problem. However, with this arrangement, the lead-in now acts as a resistive load in the tuned circuit and will cause some lowering of the circuit Q, i.e., the bandwidth will be wider and gain lower.

I prefer to let the tuned circuit "freewheel" in space and use a low-impedance coil to couple the field transformer-style to the lead-in. The low-impedance pick-up coil can be just a few turns of wire mounted coaxially with the tuned circuit and connected directly to the lead-in. Again, the pick-up coil should match the impedance of the lead-in at the tuned frequency. One size pick-up coil will do the job if the frequency range of the antenna is not too great. For shortwave loops covering several MHz, it will be necessary to tap the pick-up coil to produce the proper impedance.

It is not practical to separate the variable capacitor from the coil in the tuned circuit. Remotely tuned loops generally use varactor diodes, which vary the capacitance proportionally to the reverse voltage impressed across them.

If there is any way a tuned loop can be operated in close proximity to the radio, it should be done in preference to remote tuning. It comes down to complexity and logistics of building and operating a remote loop. Building materials and noise may be impediments to indoor loops, but a well designed loop has excellent noise reduction characteristics and can sniff out microvolt signals with amazing clarity.

Bob C.

On 12/6/2016 6:02 PM, J Ferrow ferrox4@... [loopantennas] wrote:
> Hi, How does one feed the output of a tuned loop to a radio that
> doesn't have a built in ferrrite stick??
>
> also how far away can the tuning capacitor be from the tuned loop for
> it to work? is there any way i could place a LW loop outside and tune
> it with a variable air core cap at my desktop where my radio is?? Is
> this possible??
>

> Thank-You, John
>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11676. Re: [loopantennas] how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-07 04:47:51 UTC
From: Jordan Dobrikin
Topic: 11670 Message: 11676

Hi
If one is handy try a Rube Goldberg solution with Radio Control Model Servo.
Also consider a Vacuum Variable Capacitor, overkill for capacitance, but
easy to rig up remote control. They are available on ebay for relatively
low cost
73 de Jordan ve7jjd

On Tue, Dec 6, 2016 at 7:29 PM, BobC dexterdxer@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> The unavoidable component when coupling a tuned loop to a receiver,
> regardless of whether it is going to a ferrite antenna core or to some
> other input circuit is the lead-in or transmission line. This will
> necessarily be low impedance - on the order of 50 to 100 ohms. So the
> output of the tuned loop must match this as closely as possible.
>
> At resonance a tuned loop having the capacitor and coil in series with
> lead-in will produce the necessary low impedance. That would be the
> simplest way to solve the problem. However, with this arrangement, the
> lead-in now acts as a resistive load in the tuned circuit and will cause
> some lowering of the circuit Q, i.e., the bandwidth will be wider and gain
> lower.
>
> I prefer to let the tuned circuit "freewheel" in space and use a
> low-impedance coil to couple the field transformer-style to the lead-in.
> The low-impedance pick-up coil can be just a few turns of wire mounted
> coaxially with the tuned circuit and connected directly to the lead-in.
> Again, the pick-up coil should match the impedance of the lead-in at the
> tuned frequency. One size pick-up coil will do the job if the frequency
> range of the antenna is not too great. For shortwave loops covering
> several MHz, it will be necessary to tap the pick-up coil to produce the
> proper impedance.
>
> It is not practical to separate the variable capacitor from the coil in
> the tuned circuit. Remotely tuned loops generally use varactor diodes,
> which vary the capacitance proportionally to the reverse voltage impressed
> across them.
>
> If there is any way a tuned loop can be operated in close proximity to the
> radio, it should be done in preference to remote tuning. It comes down to
> complexity and logistics of building and operating a remote loop. Building
> materials and noise may be impediments to indoor loops, but a well designed
> loop has excellent noise reduction characteristics and can sniff out

> microvolt signals with amazing clarity.
>
> Bob C.
>
> On 12/6/2016 6:02 PM, J Ferrow ferrox4@... [loopantennas] wrote:
>
>
> Hi, How does one feed the output of a tuned loop to a radio that doesn't
> have a built in ferrrite stick??
>
> also how far away can the tuning capacitor be from the tuned loop for it
> to work? is there any way i could place a LW loop outside and tune it with
> a variable air core cap at my desktop where my radio is?? Is this possible??
>
> Thank-You, John
>
>
>
>
> ----------
> [image: Avast logo]
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient>
>
> This email has been checked for viruses by Avast antivirus software.
> www.avast.com
> <https://www.avast.com/sig-email?utm_medium=email&utm_source=link&utm_campaign=sig-email
&utm_content=emailclient>
>
>
>

--
73 Jordan VE7JJD

11677. Re: [loopantennas] how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-07 10:51:10 UTC
From: John
Topic: 11670 Message: 11677

No, the tuning capacitor cannot be a distance from the loop. The wires connecting the loop and the variable cap would add so much capacitance in parallel with the variable that the change in C from min to max would be so low that the loop would only tune over a very narrow range.
In addition, the connecting wires become a part of the loop coil altering it's geometry and thus performance.

John

On 12/6/2016 3:02 PM, J Ferrow ferrox4@... [loopantennas] wrote:
>
>
> Hi, How does one feed the output of a tuned loop to a radio that
> doesn't have a built in ferrrite stick??
>
> also how far away can the tuning capacitor be from the tuned loop for it
> to work? is there any way i could place a LW loop outside and tune it
> with a variable air core cap at my desktop where my radio is?? Is this
> possible??
>
> Thank-You, John
>
>
>

11678. Re: how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-07 14:11:17 UTC
From: rbrucecarter@...
Topic: 11670 Message: 11678

If you want remote tuning - I recommend using a varactor tuned loop. You have to modify the traditional loop architecture by adding a DC blocking capacitor so the loop itself doesn't short out the power going to the varactor. I have a small weatherproof box containing the varactor tuning circuit mounted on the outdoor loop. Inside the house, I have a little box that houses a 9V battery and a 20 turn potentiometer. The only thing I need to add is a way to rotate the loop outside.

11679. Longwave Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-08 00:30:05 UTC
From: Jordan Dobrikin
Topic: 11679 Message: 11679

Hi
The Addaware is the new kid on the block adding Longwave.
73 de Jordan ve7jjd

http://www.anon-co.com/product/a38lms-antenna
http://www.anon-co.com/product/degen-de31ms-antenna

A38-LMS Addwards http://www.anon-co.com/product/a38lms-antenna
A38LMS $17.99
A38-LMS active loop antenna (LW, MW AND SW)
Description:
This “Active Loop Antenna” is able to tune and amplify the LW, MW and SW frequency band, thereby enhancing signal reception quality and increasing your overall radio listening experience. Use the “TUNING” knob to fine tune the reception signal, and attenuate the signal by adjusting the “LEVEL CONTROL” knob if there is interference caused by a signal that is too strong.
Specification:
Frequency Range:
LW: 120 ~ 400 kHz
MW: 520 ~ 1710 kHz
SW: 3.50 ~ 20.00 MHz
Power source: 2 x AAA battery (not included)
Power consumption: 8 mAh
Instructions:
1. Take out the parts and place the suction cup (7) onto the clean glass of the window.
2. Extend the wire antenna loop of the amplifier (2) by using the extension rod (6), then hang it on the hook of the suction cup or fasten it to the curtain using the clip (8).
3. Insert two batteries (AAA, UM4) into the control box (1) and close the battery cover. Place it beside your radio, plug one end of the cable (5) into the amplifier and the other end into the control box.
4. Select your desired band from the amplifier, then push the “POWER” switch of the control box to “ON” position; the power indicator LED turns green.
For SW:
If your radio has an SW antenna input jack, connect the 3.5mm plug of the control box into it; if not, then connect the 3.5mm plug of the control box into the black and red connector clips (4). Fasten the red clip to the telescopic antenna of the radio and the black clip to a self-made grounding line.
For LW/MW:

If your radio has an MW antenna input jack, connect the 3.5mm plug of the control box into it; if not, then connect the 3.5mm plug of the control box to the ferrite bar antenna coupler (3) and place it near the built-in MW antenna of the radio. For pocket sized radios, you can use the base station (9) to keep the ferrite bar antenna coupler near the MW antenna.
5. Dial the “TUNING” knob of the control box up/down for better signal reception.
6. Dial the “LEVEL CONTROL“ knob of the control box up/down if the radio signal is too strong and causes a distorted sound.
Included items:
1. Control box
2. Amplifier
3. Ferrite bar antenna coupler (for LW/MW)
4. Black and red connector clips
5. Cable with 3.5mm plugs
6. Loop extension rod for wire antenna
7. Suction cup
8. Hanging clip
9. Base station: for pocket radio

DEGEN DE31MS http://www.anon-co.com/product/degen-de31ms-antenna
DE31MS $13.99
DETAILS
Description:
The DE31MS is an active loop antenna for MW & SW reception. This antenna is specially designed for world receivers for enhancing signal reception. The small size and light weight is perfect for carrying around, traveling or simply for use at home and in the office.
Specification:
Frequency Range:
MW: 531 ~ 1602 kHz
SW: 3.90 ~ 22.00 MHz
Power source: 2 x AAA battery
Power consumption: 6 mAh
Operation:
1. Take out the unit and place the suction cup onto the clean glass of the window.
2. Drag all the soft antenna loops of the telescopic antenna, hang it onto the hook of the suction cup or fasten it to the curtain using the clips.
3. Insert two batteries (AAA size) into the controlling box and close the lid of the battery compartment. Put it beside the radio. Plug one end of the connecting cable into the amplifier box and the other end into the controlling box.
4. If the radio has the antenna input socket, plug the output port of the controlling box into the antenna input socket of the radio. Otherwise, plug it into the socket of the connector. Fasten the white clip of the connector to the telescopic antenna of the radio and fasten the black clip to the grounding line (connecting grounding line is very good for receiving

signals) of the radio.
5. After connecting correctly, turn on the power of the controlling box. The power indicator of the controlling box is bright.
--
73 de Jordan VE7JJD

11680. RE: [loopantennas] how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-08 17:37:34 UTC
From: John Sterkeson
Topic: 11670 Message: 11680

How about an enclosed flexible cable, coupled to the cap on one end with knob on the radio end.....like the old speedometer cables. ?????

Too crude perhaps?

John.....IL

From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: Wednesday, December 07, 2016 4:51 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] how to feed the output of a tuned loop to a receiver?

No, the tuning capacitor cannot be a distance from the loop. The wires
connecting the loop and the variable cap would add so much capacitance
in parallel with the variable that the change in C from min to max would
be so low that the loop would only tune over a very narrow range.
In addition, the connecting wires become a part of the loop coil
altering it's geometry and thus performance.

John

On 12/6/2016 3:02 PM, J Ferrow ferrox4@... [loopantennas] wrote:
>
>
> Hi, How does one feed the output of a tuned loop to a radio that
> doesn't have a built in ferrrite stick??
>
> also how far away can the tuning capacitor be from the tuned loop for it
> to work? is there any way i could place a LW loop outside and tune it
> with a variable air core cap at my desktop where my radio is?? Is this
> possible??
>
> Thank-You, John
>
>
>

11681. RE: [loopantennas] how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-09 02:55:53 UTC
From: kevin asato
Topic: 11670 Message: 11681

The problem with this arrangement is that the tuning will be very imprecise and subject to sudden motion due to the cable binding within the armoring. Fine tuning ability is not a characteristic of this method.
73,
kevin
kc6pob

How about an
enclosed flexible cable, coupled to the cap on one end with
knob on the radio end.....like the old speedometer cables.
????? Too crude
perhaps?John.....IL

11682. Re: [loopantennas] how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-09 09:23:54 UTC
From: John
Topic: 11670 Message: 11682

Well, if you can find a REALLY long cable :)

Varactor capacitor tuning is the easiest method, but may have intermod problems with a really strong local signal. Motor control of a air variable cap with a large reduction gear between the motor and the cap works well.

John

On 12/8/2016 9:37 AM, 'John Sterkeson' j.sterkeson@...
[loopantennas] wrote:
>
>
> How about an enclosed flexible cable, coupled to the cap on one end with
> knob on the radio end.....like the old speedometer cables. ?????
>
> Too crude perhaps?
>
> John.....IL
>

11683. Re: how to feed the output of a tuned loop to a receiver?

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-09 18:40:22 UTC
From: Robert Cavanaugh
Topic: 11670 Message: 11683

Check out alexloop website. He has a project where he uses pneumatics

Sent from my iPhone

11684. A company is about to release a medium power magnetic loop in 2017... It looks very promising.

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-10 16:25:48 UTC
From: oliver_watt_000@...
Topic: 11684 Message: 11684

A company is about to release a medium power magnetic loop in 2017... It looks very promising.

Magnetic Loop Power Up https://www.youtube.com/watch?v=fopZLlMmOo4

https://www.youtube.com/watch?v=fopZLlMmOo4

Magnetic Loop Power Up https://www.youtube.com/watch?v=fopZLlMmOo4 Chameleon Antenna are working at increasing the power for their F-LOOP and P-LOOP to something around 40W CW or 80W SSB... Everything is still in ...

View on www.youtube.com https://www.youtube.com/watch?v=fopZLlMmOo4
Preview by Yahoo

- Oliver

11685. Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 02:06:58 UTC
From: J Ferrow
Topic: 11685 Message: 11685

Hi, Has anyone tried or built this active broadband loop antenna from Graham Maynard? Does it perform well?? operating range is from 50Khz - 5 Mhz. Its looks interesting and I have many of the parts.

Thanks, John

11686. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 02:46:16 UTC
From: Fred Moore
Topic: 11685 Message: 11686

There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk (http://www.electrovalue.co.uk) that is supposed to be the source does not exist. Is there anyone that can find the specifics for that core so I can find another substitute? I have sent Graham several emails to the email address on the schematic and have not heard back from any of them. Maybe he has a new email address that someone can share.

John, this looks like a very nice preamp that could be made to work on many loops.

Thanks

Fred - N4CLA

On 12/10/2016 9:06 PM, J Ferrow ferrox4@... [loopantennas] wrote:

Hi, Has anyone tried or built this active broadband loop antenna from Graham Maynard? Does it perform well?? operating range is from 50Khz - 5 Mhz. Its looks interesting and I have many of the parts.

Thanks, John

11687. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 02:52:39 UTC
From: Andy ZL3AG
Topic: 11685 Message: 11687

On 11/12/2016, at 3:46 PM, Fred Moore n40cla@... [loopantennas] wrote:

>
> There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk that is supposed to be the source does not exist. Is there anyone that can find the specifics for that core so I can find another substitute? I have sent Graham several emails to the email address on the schematic and have not heard back from any of them. Maybe he has a new email address that someone can share.

Graham passed away in 2014.

http://www.zen22142.zen.co.uk/Media/graham.htm

11688. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 03:08:17 UTC
From: Andy ZL3AG
Topic: 11685 Message: 11688

On 11/12/2016, at 3:46 PM, Fred Moore n40cla@... [loopantennas] wrote:

>
> There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk that is supposed to be the source does not exist.

Material is N30

27mm outside diameter

AL (nH/N^2) = 4620

RS stock # 212-0926

http://uk.rs-online.com/web/p/ferrite-rings/2120926/

11689. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 03:04:08 UTC
From: J Ferrow
Topic: 11685 Message: 11689

Hi Fred Thanks for getting back, I'll play around with different cores and see if it makes much of a difference if I can't find it. I do have a few questions about construction. it says a 6X6 square loop, does that mean each side of the square is 6ft long?? Also it points to a center tap to the wire. the wire is specified to be 6 turns around that loop, so the center of the wire, that would be the 3 turn point. is where the tap goes??
Thanks, john

On Saturday, December 10, 2016 9:46 PM, "Fred Moore n40cla@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk that is supposed to be the source does not exist. Is there anyone that can find the specifics for that core so I can find another substitute? I have sent Graham several emails to the email address on the schematic and have not heard back from any of them. Maybe he has a new email address that someone can share. John, this looks like a very nice preamp that could be made to work on many loops.
Thanks Fred - N4CLA

On 12/10/2016 9:06 PM, J Ferrow ferrox4@...m [loopantennas] wrote:

  Hi, Has anyone tried or built this active broadband loop antenna from Graham Maynard? Does it perform well?? operating range is from 50Khz - 5 Mhz. Its looks interesting and I have many of the parts.

Thanks, John

11690. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 03:20:07 UTC
From: Fred Moore
Topic: 11685 Message: 11690

Thank you Andy

Fred

On 12/10/2016 10:08 PM, Andy ZL3AG zl3ag@... [loopantennas] wrote:

?

On 11/12/2016, at 3:46 PM, Fred Moore n40cla@... [loopantennas] wrote:

>
> There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk (http://www.electrovalue.co.uk) that is supposed to be the source does not exist.

Material is N30

27mm outside diameter

AL (nH/N^2) = 4620

RS stock # 212-0926

http://uk.rs-online.com/web/p/ferrite-rings/2120926/

11691. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 03:22:24 UTC
From: Fred Moore
Topic: 11685 Message: 11691

On 12/10/2016 10:04 PM, J Ferrow ferrox4@... [loopantennas] wrote:

Hi Fred Thanks for getting back, I'll play around with different cores and see if it makes much of a difference if I can't find it. I do have a few questions about construction. it says a 6X6 square loop, does that mean each side of the square is 6ft long?? Also it points to a center tap to the wire. the wire is specified to be 6 turns around that loop, so the center of the wire, that would be the 3 turn point. is where the tap goes??

Yes, and that tap goes to the ground on the input of the loop amp. Fred

Thanks, john

On Saturday, December 10, 2016 9:46 PM, "Fred Moore n40cla@... [loopantennas]" wrote:

There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk (http://www.electrovalue.co.uk/) that is supposed to be the source does not exist. Is there anyone that can find the specifics for that core so I can find another substitute? I have sent Graham several emails to the email address on the schematic and have not heard back from any of them. Maybe he has a new email address that someone can share.

John, this looks like a very nice preamp that could be made to work on many loops.

Thanks

Fred - N4CLA

On 12/10/2016 9:06 PM, J Ferrow ferrox4@... [loopantennas] wrote:

Hi, Has anyone tried or built this active broadband loop antenna from Graham Maynard? Does it perform well?? operating range is from 50Khz - 5 Mhz. Its looks interesting and I have many of the parts.

Thanks, John

11692. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 03:21:15 UTC
From: J Ferrow
Topic: 11685 Message: 11692

Hi andy, thanks-you for the toroid info. would you happen to know of a supplier in the US?? or is that only sold in the UK??
thanks john

On Saturday, December 10, 2016 10:08 PM, "Andy ZL3AG zl3ag@radioengineering.com [loopantennas]" <loopantennas@yahoogroups.com> wrote:

On 11/12/2016, at 3:46 PM, Fred Moore n40cla@... [loopantennas] wrote:

>
> There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk that is supposed to be the source does not exist.

Material is N30

27mm outside diameter

AL (nH/N^2) = 4620

RS stock # 212-0926

http://uk.rs-online.com/web/p/ferrite-rings/2120926/

11693. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 03:27:52 UTC
From: Fred Moore
Topic: 11685 Message: 11693

Thank you for the update.? Sorry to hear of Grahams passing.? You have now answered my question why I never heard back.? That link is a very nice write up for him.

Thanks, Fred

On 12/10/2016 9:52 PM, Andy ZL3AG zl3ag@... [loopantennas] wrote:

?

On 11/12/2016, at 3:46 PM, Fred Moore n40cla@... [loopantennas] wrote:

>
> There is one part on the schematic that I can not find. I would like to know what the specifics are for Siemens Ferrite Ring-core P/N B64290K618X830. It appears that P/N is no longer manufactured as well as the web site www.electrovalue.co.uk (http://www.electrovalue.co.uk) that is supposed to be the source does not exist. Is there anyone that can find the specifics for that core so I can find another substitute? I have sent Graham several emails to the email address on the schematic and have not heard back from any of them. Maybe he has a new email address that someone can share.

Graham passed away in 2014.

http://www.zen22142.zen.co.uk/Media/graham.htm

11694. Re: [loopantennas] Graham Maynards 6 X 6 active loop antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-11 10:26:30 UTC
From: Brian
Topic: 11685 Message: 11694

John,
The design has been around a long time and had many followers,
I think it started life as a ‘ Practical Wireless ‘ magazine article.

You might be interested in a similar sized loop antenna by Des, MØAYF
which performs well at a low height, see

Differential Amplified Loop Receive Antenna (G8CQX revisited) - Kitparts
www.kitparts.com/loop/Differential-Amplified-Loop-Receive-Antenna.pdf
26 Dec 2012 - Perusing the Internet I came across an article by M0AYF.
http://www.qsl.net/m0ayf/active-loop-receiving-antenna.html. The design seemed to ...

72, Brian. GØNSL.

From: mailto:loopantennas@yahoogroups.com
Sent: Sunday, December 11, 2016 2:06 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Graham Maynards 6 X 6 active loop antenna

11695. HF/SWL Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-13 03:25:19 UTC
From: jjdobrikin@...
Topic: 11695 Message: 11695

Hi.

Does anyone have experience with a HF/SWL Ferrite Magnetic Loop/Antenna Coil on a LONG Ferrite Rod.

I am looking into the feasibility of modifying a C.Crane Twin Coil Antenna.
As well as retrofitting an Antique Crystal Radio.

73 de Jordan ve7jjd

11696. Re: [loopantennas] HF/SWL Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-13 08:34:53 UTC
From: vk2tti@...
Topic: 11695 Message: 11696

Greetings, Jordan, from Max , Amongst the clutter at this computer are two antennas made from ferrite rods. The rods are nine inch by about three eights, type unknown. One consists of two rods butted together using a dab of super glue. The joint was left to cure for a few days then reinforced with a sheet of note paper and araldite wrapped around. Enameled wire 0.5mm dia. was wound on to make a coil about four inches long. The device tunes from 320kHz to 570kHz using a MFJ-936b loop tuner. It posses the atributes you would expect from a ferrite loop antenna. By using less wire and and a different position of the coil on the ferrite HF and SW reception could be achieved.
The second antenna consists of 30inches of 16mm pvc pipe. Each end of the pipe has a nine inch ferrite rod secured inside. A coil of wire is wound, at each end, over the outside of the pipe. Each coil is wound in the same "sense". The inboard ends of each coil are joined together. The outboard ends or the coils are connected to the MFJ-936b. Each coil here is about 35 turns of hook up wire. The antenna tunes1.2MHz to 2.0MHz. The null is very sharp and seems almost bottomless, noise goes into it and is never heard again Hi Hi. Please excuse any typos, its been a long day at 37DegC another like it tomorrow.
A bushfire is burning to the west, a large column blue grey smoke can be seen, usual for this time of the year. Regards to all VK2TTI

---- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
12 Dec 2016 19:25:19 -0800
Subject:
[loopantennas] HF/SWL Antenna

Hi.

Does anyone have experience with a HF/SWL Ferrite Magnetic Loop/Antenna Coil on a LONG Ferrite Rod.

I am looking into the feasibility of modifying a C.Crane Twin Coil Antenna.
As well as retrofitting an Antique Crystal Radio.

73 de Jordan ve7jjd

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11695;_ylc=X3oDMTJyOXYyYzg4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTY5NQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0ODE1OTk1MjA-?act=reply&messageNum=11695
[2] mailto:jjdobrikin@...?subject=Re%3A%20HF%2FSWL%20Antenna
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20HF%2FSWL%20Antenna
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmdmt1bm9hBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0ODE1OTk1MjA-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11695;_ylc=X3oDMTM3ZXZidDNlBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTY5NQRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0ODE1OTk1MjAEdHBjSWQDMTE2OTU-
[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmcWM1ZmJoBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0ODE1OTk1MjA-
[11]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnNmQ0b3ExBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDgxNTk5NTIw
[12]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlY2xncXV1BF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ4MTU5OTUyMA--
[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11697. battery Updates

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-14 06:00:40 UTC
From: Jordan Dobrikin
Topic: 11697 Message: 11697

Hi
To all my followers and acquaintences.

Low Self Discharge Batteries for SWL Radios, RC Sail Boats, and general Household uses.

With AA &,AAA with AA to D and AAA to C Battery Adapters.

Rechargeable Alkaline and Low Self Discharge NIMH Batteries (ENELOOP, et. al.).

Rechargeable Alkaline are lower cost and fit a niche market of applications that do not need high power surge loads that NIMH can Supply. Portable Radios Flash lights, TV/Stereo Remote Controls. Also they rate 1.56 volts as opposed the 1.20 volts of NIMH.

Now on to Low Self Discharge NIMH. Note that the Enloop Panasonic Chargers are a better bet for the Average User;IMHO.
73 de Jordan ve7jjd

---
https://www.youtube.com/watch?v=OJM2VSh9k28&t=7s
Rechargable Battery & Charger - Buying Guide Matt Granger 96,927 views
Published on Aug 13, 2013
What are the best rechargables? What are the options? And best quality/speed chargers? Check it out.

---
https://www.youtube.com/watch?v=6jVJvWQ6woE
Published on Mar 14, 2013
Need some cost-saving energy goodness? TheWireCutter has a great writeup on the best rechargeable batteries to buy based on reviews from around the web. http://thewirecutter.com/reviews/the-... This story and more right here at the FULL episode: http://revision3.com/tekzilla/pi-day-...

---
https://www.youtube.com/watch?v=zpMclVRJ4HY
7 Best AA & AAA Battery Chargers 2016 Ezvid Wiki 2,598 views Published on Sep 15, 2016
https://wiki.ezvid.com/best-aa-aaa-ba...
Aaa Battery Chargers Reviewed In This Wiki:
SunJack USB; EBL Individual Rapid Charger; Energizer Compact; Nitecore New i2 Intellicharge
SOAIY Universal 1000mA; AmazonBasics Ni-MH SunLabz 16 Slot Smart Bay
---

---
https://www.youtube.com/watch?v=2ulpjy73Ifo
10 Best NiMh Chargers 2016 1,057 views Published on Jun 25, 2016
https://wiki.ezvid.com/best-nimh-char...
Nimh Chargers Reviewed In This Wiki:
Sony BCG34HRE4KN; Tenergy Advanced TN190-4; FlePow 8 Bay Charger; Ambient Weather BC-2000; Superex RPC-C20BK Smart Universal Opus BT-C2400; AmazonBasics Ni-MH Battery Charger; NITECORE i4 Universal Battery Charger; Sun Labz Smart Battery Charger; Knox KN-16BAY

---
https://www.youtube.com/watch?v=846m-boWB64&t=71s
NiMH Battery Roundup - Eneloop, EBL, Sunlabz, Amazon, and Other AA Cells Tested
S.co.tt 2,562 1,404 views Published on Sep 22, 2016
It's not every brand or type of AA NiMH cell on the market, but it's a bunch of the popular ones. Also some really, really crappy ones. If you're trying to figure out which cells to buy, this is the video for you.
I also get extensively into the testing methodology, so if you're interested in doing your own comparison this may prove helpful. But don't worry, I go full spoiler and give you the results right up front.
https://www.youtube.com/watch?v=846m-boWB64&t=71s

---

http://www.ebay.com/itm/Panasonic-Ni-MH-Charger-BQ-CC17-for-AA-AAA-Batteries-/151549081302

- 4 Position Ni-MH battery charger delivers advanced, individual cell charging capabilities.
- Ideal for use at home, in the office, or on the road.
- retractable AC Plug makes storage or travel convenient.
- Individual Battery Charging - charge any combination of up to four AA or AAA Ni-MH rechargeable batteries.
- Auto Shut-Off safety technology - automatically stops if a non-rechargeable battery is inserted into the unit or charging process is complete.
- Individual LED Charging Indicators - Lights turn on during charging process and turn off when the specific battery cell is completely charged. there is one LED light for each battery cell.
- ---
---

http://www.ebay.com/itm/Panasonic-eneloop-Pro-Charger-BQ-CC55-Quick-smart-individual-charger-4-bay-AA-AA-/201748235722

*Brand New **Sealed in Shrink for internet sales no retail packaging*

Panasonic eneloop Pro Charger BQ CC55 Quick smart individual charger 4 bay AA/AA

need 8 or 12 or a 16 bay charger buy a bunch of these

New for Fall 2016. The long anticipated upgrade to the best rated eneloop "Advance" charger model BQ-CC17 is here. The eneloop "Quick" charger is the highest performing safest automatic charger Panasonic has ever offered. Put 4 batteries in and BAM 1-4 hours later your fully depleted high capacity AA or AAA batteries are charged to perfection. No Programs to set no buttons to push just set it and forget it. Each battery is fully charged every time and never overcharged. Get the most out of your batteries with this charger your batteries will last and last while providing optimum performance. Recommended for family's and children 8 and older. You simply can't go wrong....if you do not agree PLEASE RETURN THIS AT MY EXPENSE you have 60 days.

Recommended for High Quality NiMH LSD batteries like: eneloop, Fujitsu, Imedian, Amazon basics, Energizer, Duracell etc.

This advanced AC charger is designed to charge battery cells individually; allowing you the freedom to completely charge fully discharged cells or just "top off" the charge of AA or AAA cells that are only partially drained. The single cell charge capability allows any combination of one, two, three or four AA or AAA Ni-MH batteries to be charged at the same time.

--
73 Jordan VE7JJD

11698. A Response &

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-14 19:01:59 UTC
From: Jordan Dobrikin
Topic: 11698 Message: 11698

Hi
Thanks for the Positive response; and forwarding to other interested party's.

I now ask the other recipients consider doing the same.

I did not consider Lithium and and Battery Packs on purpose as they are still quite specialized.
RC Airplanes, Cars & Power Boats fall into this Group.

From Yahoo Group. Shortwave Radios
battery Updates
wa6ivd2@...
Jordan -
Well done! Thank you. I passed it along to our model airplane club with attention to your testing URL
"NiMH Battery Roundup - Eneloop, EBL, Sunlabz, Amazon, and Other AA Cells Tested "

I very much appreciate your TLC in the project! Thank's again!

73 wa6ivd Ken IRLP 3686 KA6AMR/R ECHO 191484

11699. Fwd: [Shortwave-SWL-Antenna] Re: battery Updates

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-16 20:55:56 UTC
From: Jordan Dobrikin
Topic: 11699 Message: 11699

---------- Forwarded message ----------
From: rrmvargo@... [Shortwave-SWL-Antenna] <
Shortwave-SWL-Antenna@yahoogroups.com>
Date: Thu, Dec 15, 2016 at 7:09 PM
Subject: [Shortwave-SWL-Antenna] Re: battery Updates
To: Shortwave-SWL-Antenna@yahoogroups.com

I find that some of the smart chargers I have, will not charge or recognize
some batteries. I also find that the old "dumb" Energizer charger I have
had for 8+ years, will fully charge any rechargeable AA or AAA I have. It
may not be as quick, but it never fails. The only issue I have with it is
the batteries must be paired together. They cannot be individually
charged. Now I know that may not be optimal, but it is much much better
than not being able to charge them at all. And after I get them near full
charge, I can switch them over to an enelope type charger for finishing. 73
Bob

Posted by: rrmvargo@...

Reply via web post
<https://groups.yahoo.com/neo/groups/Shortwave-SWL-Antenna/conversations/messages/27932;_y
lc=X3oDMTJyODg0dDY2BF9TAzk3MzU5NzE0BGdycElkAzEwMzA2MDE3BGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAM
yNzkzMgRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0ODE5MjA0Mjg-?act=reply&messageNum=27932>
• Reply to sender <rrmvargo@aol.com?subject=Re%3A%20battery%20Updates> • Reply
to group
<Shortwave-SWL-Antenna@yahoogroups.com?subject=Re%3A%20battery%20Updates>
• Start
a New Topic
<https://groups.yahoo.com/neo/groups/Shortwave-SWL-Antenna/conversations/newtopic;_ylc=X3o
DMTJmYThnOWdoBF9TAzk3MzU5NzE0BGdycElkAzEwMzA2MDE3BGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsa
wNudHBjBHN0aW1lAzE0ODE5MjA0Mjg->
• Messages in this topic
<https://groups.yahoo.com/neo/groups/Shortwave-SWL-Antenna/conversations/topics/27930;_ylc
=X3oDMTM3c3E2bjJvBF9TAzk3MzU5NzE0BGdycElkAzEwMzA2MDE3BGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMyN
zkzMgRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0ODE5MjA0MjgEdHBjSWQDMjc5MzA->
(2)

Have you tried the highest rated email app? <https://yho.com/1wwmgg>
With 4.5 stars in iTunes, the Yahoo Mail app is the highest rated email app
on the market. What are you waiting for? Now you can access all your
inboxes (Gmail, Outlook, AOL and more) in one place. Never delete an email
again with 1000GB of free cloud storage.
---
moderately yours ~ RHF

.

Visit Your Group
<https://groups.yahoo.com/neo/groups/Shortwave-SWL-Antenna/info;_ylc=X3oDMTJmMmp1NjFyBF9TAzk3MzU5NzE0BGdycElkAzEwMzA2MDE3BGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0ODE5MjA0Mjg->

- New Members
<https://groups.yahoo.com/neo/groups/Shortwave-SWL-Antenna/members/all;_ylc=X3oDMTJna3AxNDI1BF9TAzk3MzU5NzE0BGdycElkAzEwMzA2MDE3BGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDgxOTIwNDI4>
5

[image: Yahoo! Groups]
<https://groups.yahoo.com/neo;_ylc=X3oDMTJlYThoczZ2BF9TAzk3NDc2NTkwBGdycElkAzEwMzA2MDE3BGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ4MTkyMDQyOQ-->
• Privacy <https://info.yahoo.com/privacy/us/yahoo/groups/details.html> •
Unsubscribe
<Shortwave-SWL-Antenna-unsubscribe@yahoogroups.com?subject=Unsubscribe> • Terms
of Use <https://info.yahoo.com/legal/us/yahoo/utos/terms/>

.
Hi
"Save your Confederate $, The South will rise again!"

Thanks for the response and advice.
To "others" make sure your Low Cost ENELOOP, Panasonic Charger is one of
the newer versions that can charge each cell individually.
73 de Jordan VE7JJD

11700. Re: [Shortwave-SWL-Antenna] Re: best mode for dial spin

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-17 01:37:40 UTC
From: Jordan Dobrikin
Topic: 11700 Message: 11700

Hi
A conundrum!The Fox guarding the Chickenhouse? Is it Cricket?

An SDR as an ersatz Panadapter. The Panadapter looked at the IF bandwidth.

A SDR looks at DC to almost infinity!

My vote is for the SDR to spot activity and then using one's SWL Receiver
to listen/Log.
73 de ve7 jjd

On Fri, Dec 16, 2016 at 4:30 PM, ja7tdo@... [Shortwave-SWL-Antenna] <
Shortwave-SWL-Antenna@yahoogroups.com> wrote:

>
>
> Hi,
>
> Please consider SDR. you can look wide frequency area on PC. it is easy to
> look for signals. my Soft66Q is cheap and usable.
>
> Soft66Q <http://www.zao.jp/radio/soft66rtl/soft66q.php>
>
> [image: image] <http://www.zao.jp/radio/soft66rtl/soft66q.php>
> Soft66Q <http://www.zao.jp/radio/soft66rtl/soft66q.php>
> TOP PAGE count:7323 Soft66Q RTL2832U Direct Sampling 8bit ADC 28.8MHz
> clock. 3kHz to 24MHz with precise OP amp above 14.4MHz is ove...
> View on www.zao.jp <http://www.zao.jp/radio/soft66rtl/soft66q.php>
> Preview by Yahoo
>
>
>
>
>

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73 Jordan VE7JJD

11701. Ultimate Stealth Antenna!!!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-18 02:02:23 UTC
From: Jordan Dobrikin
Topic: 11701 Message: 11701

Hi

The ultimate Stealth Antenna!!!
How many Housing Associations regulate against Lawn /Patio or Balcony Furniture?
I am going to use with a HF/SWL, Receive Only, Remotely Tuned, Magnetic Loop Antenna. Ultralights use it for a portable Field Day Antenna
You HAMS use something robust but flexible, like FlexWeave.

http://www.crystalradio.net/crystalplans/xximages/umbrella5.jpg

http://www.crystalradio.net/

73 de Jordan ve7jjd

[image: http://www.crystalradio.net/crystalplans/xximages/umbrella5.jpg]

--
73 Jordan VE7JJD

11702. winding a toroid.

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-20 02:13:01 UTC
From: J Ferrow
Topic: 11702 Message: 11702

Hi, can someone share with me their method of winding a toroid? specifically it's the transformer in Graham Maynards active loop circuit. the specs call for 8 windings - center tap - 8 windings on the primary and then an 8 winding secondary.
my question is regarding the center tapped primary. Do i wind 16 turns on the primary then just tap it in the middle with a length of wire soldered to approx. the eighth turn (the middle) or can i wrap eight turns use the "end wire" of those turns as the center tap, then wind another eight turns, but use the "beginning wire" as the center tap. In other words I would have two wires as the center tap, but i would have a total of 16 turns.

Thanks to all, John

11703. Re: [loopantennas] winding a toroid.

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-20 02:37:25 UTC
From: Will Kimber
Topic: 11702 Message: 11703

Hi,

Normally you wind 8 turns. Make a loop in wire, twist it tightish, then continue with the rest of the wire for other 8 turns. The twist is then shortened to suit and soldered together and is your center tap.

Cheers,
Will

On 12/20/2016 03:13 PM, J Ferrow ferrox4@... [loopantennas] wrote:
> Hi, can someone share with me their method of winding a toroid?
> specifically it's the transformer in Graham Maynards active loop
> circuit. the specs call for 8 windings - center tap - 8 windings on
> the primary and then an 8 winding secondary.
>
> my question is regarding the center tapped primary. Do i wind 16 turns
> on the primary then just tap it in the middle with a length of wire
> soldered to approx. the eighth turn (the middle) or can i wrap eight
> turns use the "end wire" of those turns as the center tap, then wind
> another eight turns, but use the "beginning wire" as the center tap.
> In other words I would have two wires as the center tap, but i would
> have a total of 16 turns.
>
> Thanks to all, John
>

11704. RE: [loopantennas] winding a toroid.

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-20 11:31:00 UTC
From: <g8lco10@...>
Topic: 11702 Message: 11704
Attachments: 1 described; binary payloads are missing from this source WARC

John
As the windings are all 8 turn multiples you can twist three wires together then wind eight turns
through the core, joining one start to another finish to make the 8+8 center tapped winding. Twisting the wires together increases the coupling between the windings and helps ensure good balance and a wider and flatter frequency response

To make things simpler you can color two wires with different spirit marker pens before twisting so that it is easy to connect them after winding the core. Something around 5-8 twists/ inch will be fine but not at all critical for this use. You count turns as the number of times the wire passes through the hole.

A great source of cores and info is www.kitsandparts.com. There is a very handy page of info for every core they sell with a handy calculator for inductance/ frequency/ capacitance/ turns and wire length- you put in what you know and it tells you what you did not know.

Regards,
Alan
G8LCO.

Sent from Mail for Windows 10

From: Will Kimber zl1tao@... [loopantennas]
Sent: Tuesday, December 20, 2016 3:01 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] winding a toroid.

Hi,
Normally you wind 8 turns. Make a loop in wire, twist it tightish, then continue with the rest of the wire for other 8 turns. The twist is then shortened to suit and soldered together and is your center tap.
Cheers,
Will
On 12/20/2016 03:13 PM, J Ferrow ferrox4@... [loopantennas] wrote:

Hi, can someone share with me their method of winding a toroid? specifically it's the transformer in Graham Maynards active loop circuit. the specs call for 8 windings - center tap - 8 windings on the primary and then an 8 winding secondary.

my question is regarding the center tapped primary. Do i wind 16 turns on the primary then just tap it in the middle with a length of wire soldered to approx. the eighth turn (the middle) or can i wrap eight turns use the "end wire" of those turns as the center tap, then wind another eight turns, but use the "beginning wire" as the center tap. In other words I would have two wires as the center tap, but i would have a total of 16 turns.

Thanks to all, John

11705. Re: [loopantennas] winding a toroid. [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-20 18:00:38 UTC
From: J Ferrow
Topic: 11702 Message: 11705

alan, thanks for the info, but i'm confused. first off we are talking about the primary only, is that correct? because the secondary has 8 turns also, but no center tap.

so are you saying use three wires, as if they were one wire??

On Tuesday, December 20, 2016 6:31 AM, "g8lco10@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  [Attachment(s) from g8lco10@... included below] JohnAs the windings are all 8 turn multiples you can twist three wires together then wind eight turns through the core, joining one start to another finish to make the 8+8 center tapped winding. Twisting the wires together increases the coupling between the windings and helps ensure good balance and a wider and flatter frequency response To make things simpler you can color two wires with different spirit marker pens before twisting so that it is easy to connect them after winding the core. Something around 5-8 twists/ inch will be fine but not at all critical for this use. You count turns as the number of times the wire passes through the hole. A great source of cores and info is www.kitsandparts.com. There is a very handy page of info for every core they sell with a handy calculator for inductance/ frequency/ capacitance/ turns and wire length- you put in what you know and it tells you what you did not know.
 Regards,AlanG8LCO.   Sent from Mail for Windows 10 From: Will Kimber zl1tao@... [loopantennas]
Sent: Tuesday, December 20, 2016 3:01 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] winding a toroid.   Hi,Normally you wind 8 turns. Make a loop in wire, twist it tightish, then continue with the rest of the wire for other 8 turns. The twist is then shortened to suit and soldered together and is your center tap.   Cheers, WillOn 12/20/2016 03:13 PM, J Ferrow ferrox4@... [loopantennas] wrote:
  Hi, can someone share with me their method of winding a toroid? specifically it's the transformer in Graham Maynards active loop circuit. the specs call for 8 windings - center tap - 8 windings on the primary and then an 8 winding secondary. my question is regarding the center tapped primary. Do i wind 16 turns on the primary then just tap it in the middle with a length of wire soldered to approx. the eighth turn (the middle) or can i wrap eight turns use the "end wire" of those turns as the center tap, then wind another eight turns, but use the "beginning wire" as the center tap. In other words I would have two wires as the center tap, but i would have a total of 16 turns. Thanks to all, John

11706. Re: HF/SWL Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-21 05:17:50 UTC
From: lowalacrity@...
Topic: 11695 Message: 11706

Jordan,
I never found ferrite loops to be very effective for shortwave reception. You can get marginal performance up in the the tropical bands, Stick to a longwire or skywire loop for good DX. Sorry for the late reply.
John, kg6zbn

11707. RE: [loopantennas] winding a toroid.

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-21 13:46:44 UTC
From: <g8lco10@...>
Topic: 11702 Message: 11707
Attachments: 1 described; binary payloads are missing from this source WARC

OK try again!

The primary is 8 turns + 8 turns, the secondary is 8 turns. So we wind 8 turns on with three wires,
Lets call them red green and blue. You connect the start of the red to one of the junctions of two (upper)220 ohm resistors, the end of the red then joins the start of the green, that junction going to ground. The end of the green is the other junction of the (lower) 220 ohm resistors. The blue winding is the secondary and the output to the receiver.

So one half of the primary is the red winding of 8 turns, the other half is the green winding of 8 turns. The end to start connection puts the centre tap (of the total 16 turns) in the exact centre electrically. The circuit has two three transistor amplifiers, the top amplifier produces an output of reverse polarity to the lower amplifier so the two primary windings are connected start to finish to correctly add the two signals together.

Winding the three wires together is much better electrically than winding three separate coils, the twisted wires produce much better coupling and balance between the windings. You space the turns so that the start and end windings are close by and you are using all of the toroid.

Hope you understand

Alan
G8LCO

Sent from Mail for Windows 10

From: J Ferrow ferrox4@... [loopantennas]
Sent: Tuesday, December 20, 2016 6:00 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] winding a toroid.

alan, thanks for the info, but i'm confused. first off we are talking about the primary only, is that correct? because the secondary has 8 turns also, but no center tap.

so are you saying use three wires, as if they were one wire??

On Tuesday, December 20, 2016 6:31 AM, "g8lco10@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

[Attachment(s) from g8lco10@... included below]
John
As the windings are all 8 turn multiples you can twist three wires together then wind eight turns
through the core, joining one start to another finish to make the 8+8 center tapped winding. Twisting the wires together increases the coupling between the windings and helps ensure good balance and a wider and flatter frequency response

To make things simpler you can color two wires with different spirit marker pens before twisting so that it is easy to connect them after winding the core. Something around 5-8 twists/ inch will be fine but not at all critical for this use. You count turns as the number of times the wire passes through the hole.

A great source of cores and info is www.kitsandparts.com. There is a very handy page of info for every core they sell with a handy calculator for inductance/ frequency/ capacitance/ turns and wire length- you put in what you know and it tells you what you did not know.

Regards,
Alan
G8LCO.

Sent from Mail for Windows 10

From: Will Kimber zl1tao@... [loopantennas]
Sent: Tuesday, December 20, 2016 3:01 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] winding a toroid.

Hi,
Normally you wind 8 turns. Make a loop in wire, twist it tightish, then continue with the rest of the wire for other 8 turns. The twist is then shortened to suit and soldered together and is your center tap.
Cheers,
Will
On 12/20/2016 03:13 PM, J Ferrow ferrox4@... [loopantennas] wrote:

Hi, can someone share with me their method of winding a toroid? specifically it's the transformer in Graham Maynards active loop circuit. the specs call for 8 windings - center tap - 8 windings on the primary and then an 8 winding secondary.

my question is regarding the center tapped primary. Do i wind 16 turns on the primary then just tap it in the middle with a length of wire soldered to approx. the eighth turn (the middle) or can i wrap eight turns use the "end wire" of those turns as the center tap, then wind another eight turns, but use the "beginning wire" as the center tap. In other words I would have two wires as the center tap, but i would have a total of 16 turns.

Thanks to all, John

11708. loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-20 17:39:27 UTC
From: gm6jua@...
Topic: 11708 Message: 11708

Hi To the group,
I am building an octagonal loop and want to control the variable capacitor using an arduino and a 4 wire bipolar stepper motor, so far I have a sketch to turn the motor 1 step at a time and another to use a potentiometer but I want to use an I2c lcd screen to show the number of steps moved ,however I have trolled the web with no success to find an example sketch that I can use to do this.
Have any of the group got such a sketch they could send me that would allow me to get tisworking.
thanks in advance
Dave gm6jua

11709. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-22 23:25:55 UTC
From: Phillips
Topic: 11708 Message: 11709

Hi Dave,

I2C LCD displays on Arduino are easy once you get the correct library to match your I2C interface chip. A common chip is the PCF8574. You can get displays with this chip already installed from a number of retailers.

The link below is to the tutorial that I used to learn how to drive the PCF8574. There are PCF8574 libraries available on sources such as github as well as the source listed in the tutorial. However, the commands used in one library do not necessarily match the commands in another library and so the sketch code must match the library.

The biggest "gotcha!" is the I2C address of the PCF8574. You must have the correct address of the chip. If you do not know the address of the chip, there are sketches that will scan the I2C bus and display the results to the serial monitor. There is a link to an I2C scanner sketch in the tutorial.

http://tronixstuff.com/2014/09/24/tutorial-serial-pcf8574-backpacks-hd44780-compatible-lcd-modules-arduino/

<http://tronixstuff.com/2014/09/24/tutorial-serial-pcf8574-backpacks-hd44780-compatible-lcd-modules-arduino/>

<http://tronixstuff.com/2014/09/24/tutorial-serial-pcf8574-backpacks-hd44780-compatible-lcd-modules-arduino/>

Beware! Arduinos are addictive!

Ray

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The keyboard layout for rational thinkers
Standard with Mac, Linux & Android. Free for Windows
Training at http://thetypingcat.com/course/colemak
<http://www.michaelcapewell.com/projects/keyboard/layout_capewell-dvorak.htm>

From: loopantennas@yahoogroups.com <loopantennas@yahoogroups.com> on behalf of gm6jua@...
[loopantennas] <loopantennas@yahoogroups.com>
Sent: Wednesday, 21 December 2016 4:09 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] loop antenna control

Hi To the group,

I am building an octagonal loop and want to control the variable capacitor using an arduino

and a 4 wire bipolar stepper motor, so far I have a sketch to turn the motor 1 step at a time and another to use a potentiometer but I want to use an I2c lcd screen to show the

number of steps moved ,however I have trolled the web with no success to find an example sketch that I can use to do this.

Have any of the group got such a sketch they could send me that would allow me to get tisworking.

thanks in advance

Dave gm6jua

11710. Addwards A38-LMS Active Loop Antenna diagram added to Files

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-23 20:31:03 UTC
From: Steve Ratzlaff
Topic: 11710 Message: 11710

I have added my traced-out diagram of the Addwards A38-LMS Active Loop Antenna to the Files. Someone mentioned this antenna recently; I ordered one, tried it out then opened it up to try to trace the circuitry. It's apparently a variation of the Kaito D31 Active Loop Antenna, adding LW and MW.

I was primarily interested in its LW performance (stated as 120-400 kHz). The single-turn loop is 21.6 inches diameter--not a very large loop for LW usage. Using a stock Tecsun PL-380 pocket radio with the Addwards loop on LW I was only able to receive my very strongest local NDB (338 RYN, listed as 400 watts) about 12 miles away. And even the deaf PL-380 can receive RYN by itself, though the signal was boosted quite a bit by the Active Loop. Another 25 watt NDB about 15 miles away wasn't received. The Active Loop did peak the noise over the full tuning range of the loop, indicating it was working. A brief MW check indicated it wasn't very sensitive on MW either though better than on LW. I didn't try it on SW.

I did have fun tracing out the circuit though. :) It uses a two-transistor DC-DC converter operating at 2.4 MHz to step up the 3 volts battery voltage to 11.5 volts DC for the varactor tuning voltage. Note it appears to be more or less identical to the same circuit used in the Kaito D31 active loop, based on the traced-out circuit a German fellow did of the D31. (The SW specs of the A38 loop are given as 3.5-20 MHz so apparently the DC-DC converter isn't heard on any harmonics in the SW range though I didn't check.)

I don't have a Kaito D31 Active Loop to try, but it appears to tune only SW, so I have little interest in that. But based on my experience with the Addwards loop, unless you just want SW performance don't bother buying one.

73,

Steve AA7U

11711. Re: [loopantennas] Addwards A38-LMS Active Loop Antenna diagram added to Files

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-24 00:42:05 UTC
From: Donald Tomkinson
Topic: 11710 Message: 11711

Hi Steve,

I was able to receive SB 396 15mi away, FCH 344 220mi, RYN 338, 398mi and a DGPS ~290 kHz after it got dark. Used my Sony 2010 rx with the included ferrite inductor and also plugged the loop into the AM antenna jack with the loop mounted outside in the clear. Nothing below 290 kHz. The LW switch position did not seem to do anything worthwhile (inop?). The MW switch position was much better for the NDB's. MW stations were OK. Did not check SW.

I guess it would be a cheap temporary/travel alternative as an outside MW antenna if you have nothing else and poor MW reception. The ~5m cable from the antenna to the amp was a plus. Received mine in about 6 days. I broke the little "L" on the loops spring clip straight away as it was too small for the loop antenna wire/coax (I forget if it is a wire or coax). So I just put the loop wire/coax in the jaws of the tiny plastic clip before hanging the loop. A wooden clothes pin with a spring would work just as well.

Even the cheap knock off mini-whip active antennas on the 'bay work way better with no switching or tuning. Interesting to play with for only US$20 but not a really serious antenna for Dxing.....

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Don KPC6NDB
Upland, CA
34.10 -117.63 1250ft
FRG-100B FunCube Dongle Pro+
ICF2010 Perseusx3 WR-G31DDCx4
R70 R71A w/250Hz R75x2 w/250Hz
PRN1000x2 SDR-IQ SPR-4 SSR-1
SR-AF & LPF DSP599zx MFJ-784B
HD-1418 AF-1 MSB-1
PA0RDT-MWx2 @20ft DXE-ARAV3-1Px2 @18ft
RYOAA @20ft 28ft LF LNV
ALA100Lx2 Z1501F @20ft
Russian MW @18ft

On 23-Dec-16 12:31, Steve Ratzlaff ratzlaffsteve@...
[loopantennas] wrote:
> I have added my traced-out diagram of the Addwards A38-LMS Active Loop
> Antenna to the Files. Someone mentioned this antenna recently; I ordered
> one, tried it out then opened it up to try to trace the circuitry. It's
> apparently a variation of the Kaito D31 Active Loop Antenna, adding LW

> and MW.
>
> I was primarily interested in its LW performance (stated as 120-400
> kHz). The single-turn loop is 21.6 inches diameter--not a very large
> loop for LW usage. Using a stock Tecsun PL-380 pocket radio with the
> Addwards loop on LW I was only able to receive my very strongest local
> NDB (338 RYN, listed as 400 watts) about 12 miles away. And even the
> deaf PL-380 can receive RYN by itself, though the signal was boosted
> quite a bit by the Active Loop. Another 25 watt NDB about 15 miles away
> wasn't received. The Active Loop did peak the noise over the full tuning
> range of the loop, indicating it was working. A brief MW check indicated
> it wasn't very sensitive on MW either though better than on LW. I didn't
> try it on SW.
>
> I did have fun tracing out the circuit though. :) It uses a
> two-transistor DC-DC converter operating at 2.4 MHz to step up the 3
> volts battery voltage to 11.5 volts DC for the varactor tuning voltage.
> Note it appears to be more or less identical to the same circuit used in
> the Kaito D31 active loop, based on the traced-out circuit a German
> fellow did of the D31. (The SW specs of the A38 loop are given as 3.5-
> 20 MHz so apparently the DC-DC converter isn't heard on any harmonics in
> the SW range though I didn't check.)
>
> I don't have a Kaito D31 Active Loop to try, but it appears to tune only
> SW, so I have little interest in that. But based on my experience with
> the Addwards loop, unless you just want SW performance don't bother
> buying one.
>
> 73,
>
> Steve AA7U
>
>
>
> ---
> Posted by: Steve Ratzlaff <ratzlaffsteve@...>
> ---
>
> If you've got links, post them in the Links section!
> http://groups.yahoo.com/group/loopantennas/links
>
> Post files here. If the file comes from a website, please put it in the Links rather than
uploading the file.
> http://groups.yahoo.com/group/loopantennas/files
>
> You can now view images at higher resolution in Photos. Upload JPG and GIF into Photos.
Please convert BMP or TIF to JPG or GIF before uploading.
> http://ph.groups.yahoo.com/group/loopantennas/photos
>
> And please trim all this when replying!

> ------------------------------------
>
> Yahoo Groups Links
>
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>

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11712. Learning to make a magnetic loop with survival tech nord!

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-24 02:56:51 UTC
From: oliver_watt_000@...
Topic: 11712 Message: 11712

Learning to make a magnetic loop with survival tech nord!

DIY MAGNETIC LOOP LEARNING SERIES with Survival Tech Nord View this email in your browser http://us3.campaign-archive2.com/?u=e1cdcbe4da58e8277f75bd6b9&id=5619abe9ef&e=[UNIQID] DIY MAGNETIC LOOP LEARNING SERIES with Survival Tech Nord https://youtu.be/51bkgyOjIjY Your text caption goes here. You can change the position of the caption and set styles in the block’s settings tab. https://youtu.be/iafP0eERYy0

- Oliver

11713. Re: HF/SWL Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-24 23:06:42 UTC
From: Laurence Taylor
Topic: 11695 Message: 11713

lowalacrity@... lowalacrity wrote:

> I never found ferrite loops to be very effective for shortwave
> reception. You can get marginal performance up in the the tropical
> bands, Stick to a longwire or skywire loop for good DX. Sorry for the
> late reply.
>
> John, kg6zbn

Many years ago I had a Russian radio (Vega Meridian), which used ferrite rods for all bands including SW. Although there was a telescopic whip as well, for strong stations the rod was perfectly good; I used it frequently at work for 31 and 49m.

--
rgds
LAurence
<><
...
Get your grubby hands off my tagline! I stole it first!

11714. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-23 05:07:47 UTC
From: Joe Burch
Topic: 11708 Message: 11714

IMHO, it's more challenging to write assembly level code as opposed to using these canned 'sketches'.
Joe - K3JLS

On Thursday, December 22, 2016 6:26 PM, "Phillips phillicom@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

Hi Dave,
I2C LCD displays on Arduino are easy once you get the correct library to match your I2C interface chip. A common chip is the PCF8574. You can get displays with this chip already installed from a number of retailers.

The link below is to the tutorial that I used to learn how to drive the PCF8574. There are PCF8574 libraries available on sources such as github as well as the source listed in the tutorial. However, the commands used in one library do not necessarily match the commands in another library and so the sketch code must match the library.
The biggest "gotcha!" is the I2C address of the PCF8574. You must have the correct address of the chip. If you do not know the address of the chip, there are sketches that will scan the I2C bus and display the results to the serial monitor. There is a link to an I2C scanner sketch in the tutorial.
http://tronixstuff.com/2014/09/24/tutorial-serial-pcf8574-backpacks-hd44780-compatible-lcd-modules-arduino/

Beware! Arduinos are addictive!

Ray

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From: loopantennas@yahoogroups.com <loopantennas@yahoogroups.com> on behalf of gm6jua@... [loopantennas] <loopantennas@yahoogroups.com>
Sent: Wednesday, 21 December 2016 4:09 AM
To: loopantennas@yahoogroups.com
Subject: [loopantennas] loop antenna control Hi To the group, I am building an octagonal loop and want to control the variable capacitor using an arduino and a 4 wire bipolar stepper motor, so far I have a sketch to turn the motor 1 step at a time and another to use a potentiometer but I want to use an I2c lcd screen to show the number of steps moved ,however I have trolled the web with no success to find an example sketch that I can use to do this.Have any of the group got such a sketch they could send me that would allow me to get tisworking.thanks in advanceDave gm6jua

11715. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-23 19:11:53 UTC
From: gm6jua@...
Topic: 11708 Message: 11715

Hi Ray, thanks for the reply,
my problem is that I have everything working without an lcd read out ,but don't know how to add the code for this to happen,I'm very new to arduino so I was hoping maybe someone had a sketch that I could adapt to my pin settings so that the steps turned using the rotary encoder would show on the lcd, then I would be able to set a start point that the capacitor could return to when I used the rotary encoder press switch.
my main trouble is that at 70 yrs old its a bit daunting trying to get to grips with arduino code,
best regards
dave

11716. Re: loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-24 23:38:01 UTC
From: alienrelics@...
Topic: 11708 Message: 11716

Have you tried the forum at Arduino.cc yet? A lot of knowledgeable people there.

http://forum.arduino.cc/ http://forum.arduino.cc/

Steve Greenfield AE7HD

11717. Re: [loopantennas] Re: HF/SWL Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-25 00:20:22 UTC
From: Jordan Dobrikin
Topic: 11695 Message: 11717

Hi
Thanks for the Response.
These are to Loop Stick Antennas that I bought on Ebay.
I found out later that they are from the Russian Meridian.
I plan to use the HF/SWL Stick as an experimental retrofit of a C. Crane AM
Twin Loop Antenna.
Later on my plan(s) are to augment or retrofit some vintage radios.
73 de Jordan ve7jjd

[image: 200 mm Long Ferrite Rod AM LW-MW Coil Crystal Radio Loopstick
Antenna Aerial]
<http://www.ebay.com/itm/132017831201?_trksid=p2057872.m2749.l2648&ssPageName=STRK%3AMEBID
X%3AIT>
200 mm Long Ferrite Rod AM LW-MW Coil Crystal Radio Loopstick Antenna Aerial
<http://www.ebay.com/itm/132017831201?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBID
X%3AIT>
(132017831201)
Estimated delivery *Mon, Dec 19 - Wed, Dec 28*
Tracking number: *Tracking number*RS080971497LV
Add note

*Item 200 mm Long Ferrite Rod AM LW-MW Coil Crystal Radio Loopstick Antenna
Aerial Orders 132017831201-0-1295899208003*

[image: 200 mm Long Ferrite Rod SW Coil Crystal Radio Loopstick Antenna
Aerial]
<http://www.ebay.com/itm/142194388355?_trksid=p2057872.m2749.l2648&ssPageName=STRK%3AMEBID
X%3AIT>

ORDER DATE
Dec 11, 2016
*Order Steinite Laboratories Crystal Radio*Leave feedback
<http://feedback.ebay.com/ws/eBayISAPI.dll?LeaveFeedbackShow&useridto=kent9858&transactID=
0&item=322349543738&_trksid=p2057872.m2749.l2665>
[image: Steinite Laboratories Crystal Radio]
<http://www.ebay.com/itm/322349543738?_trksid=p2057872.m2749.l2648&ssPageName=STRK%3AMEBID
X%3AIT>
Steinite Laboratories Crystal Radio
<http://www.ebay.com/itm/322349543738?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBID
X%3AIT>
(322349543738)
Delivered on *Mon, Dec 19*
Tracking number: *Tracking number*CF026011235US

ORDER DATE
Dec 18, 2016

*Order RCA RADIOLA III-A VINTAGE 1924 RADIO*Leave feedback
<http://feedback.ebay.com/ws/eBayISAPI.dll?LeaveFeedbackShow&useridto=flashpanblue&transactID=0&item=132031453070&_trksid=p2057872.m2749.l2665>

[image: RCA RADIOLA III-A VINTAGE 1924 RADIO]
<http://www.ebay.com/itm/132031453070?_trksid=p2057872.m2749.l2648&ssPageName=STRK%3AMEBIDX%3AIT>
RCA RADIOLA III-A VINTAGE 1924 RADIO
<http://www.ebay.com/itm/132031453070?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT>
(132031453070)

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Dec 20, 2016
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US $49.99
+ US $34.26
shipping
*Order Vintage Early Homebrew Battery Powered Tube AM Radio Set 3 Tubes
Black Front*Leave feedback
<http://feedback.ebay.com/ws/eBayISAPI.dll?LeaveFeedbackShow&useridto=auctionbayonline&transactID=0&item=361853280867&_trksid=p2057872.m2749.l2665>
[image: Vintage Early Homebrew Battery Powered Tube AM Radio Set 3 Tubes
Black Front]
<http://www.ebay.com/itm/361853280867?_trksid=p2057872.m2749.l2648&ssPageName=STRK%3AMEBIDX%3AIT>
Vintage Early Homebrew Battery Powered Tube AM Radio Set 3 Tubes Black Front
<http://www.ebay.com/itm/361853280867?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT>
(361853280867)
Estimated delivery *Fri, Jan 06 - Mon, Jan 16*
Tracking number: *Tracking number*UPAAA000000201994787
Add note
ITEM PRICE:
US $49.99

On Sat, Dec 24, 2016 at 3:06 PM, Laurence Taylor lozt@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> lowalacrity@... lowalacrity wrote:
>
> > I never found ferrite loops to be very effective for shortwave
> > reception. You can get marginal performance up in the the tropical
> > bands, Stick to a longwire or skywire loop for good DX. Sorry for the
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> > John, kg6zbn
>
> Many years ago I had a Russian radio (Vega Meridian), which used ferrite

> rods for all bands including SW. Although there was a telescopic whip as
> well, for strong stations the rod was perfectly good; I used it frequently
> at work for 31 and 49m.
>
> --
> rgds
> LAurence
> <><
> ...
> Get your grubby hands off my tagline! I stole it first!
>
>

--
73 Jordan VE7JJD

11718. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-25 23:06:45 UTC
From: Phillips
Topic: 11708 Message: 11718

Hi Dave,

I am approaching 70 myself. Even with an IT/programming background, I found the microcontroller world to be like operating in the fifth dimension. With time and experience, things came clearer. Still lotsa fog but clearer.

I found getting the LCD I2C working difficult because of the variability of libraries and their conflict with the standard Arduino compilers' libraries. That is why I offered to add the LCD code to your existing program.

The first thing to get clear is the type of the I2C interface chip. Once that is established things will go smoothly.

Then you need to put the correct library in wherever your store your arduino libraries. You may find that you already have a liquid crystal I2C library in your library folder. If you do, it would be best to move that whole library into an archive folder separate from the arduino software. This is because the compilers have a very good search process and will find all versions of a declared library whether you want them to or not and they are very pig-headed as to what library they choose to use.

Restart your arduino programming software so that it recognises the new library.

Within the code:

1.. At the top of the sketch is a place where libraries are declared. Add your I2C library here (#include <.....h>) You also may need to add #include <LCD.h> Here's a gotcha! Names in Arduino are case sensitive, you must follow capitalisation perfectly.

2.. Then you need to put in a backpack declaration. This varies from library to library eg

LiquidCrystal_I2C lcd(0x27,2,1,0,4,5,6,7); // 0x27 is the I2C bus address for an unmodified backpack

or

LiquidCrystal_I2C lcd(32,16,2); // set the LCD address to 0x20 for a 16 chars and 2 line display

or

others depending on how the libraries are written.

3.. In the " setup " section code put in your LCD initialisation code. Most libraries come with with an "examples" folder. You can copy the setup code from any of the examples that initialise the LCD.

4.. In the " loop " section you put your action code. When you want to write to the LCD, just specify the LCD location, clear what's there and write your new characters.

Please let me know if your LCD is using a PCF8574. If it is, I can put together a package of library and example code for you.

or

If you follow the tutorial link I sent, there are links to a library and sample code in there - should give you what you are looking for.

All the best,

Ray

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The keyboard layout for rational thinkers
Standard with Mac, Linux & Android. Free for Windows
Training at http://thetypingcat.com/course/colemak
<http://www.michaelcapewell.com/projects/keyboard/layout_capewell-dvorak.htm>

_____
From: loopantennas@yahoogroups.com <loopantennas@yahoogroups.com> on behalf of gm6jua@...
[loopantennas] <loopantennas@yahoogroups.com>
Sent: Saturday, 24 December 2016 5:41 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] loop antenna control

Hi Ray,

thanks for the reply,
my problem is that I have everything working without an lcd read out ,but don't know how to add the code for this to happen,I'm very new to arduino so I was hoping maybe someone had a sketch that I could adapt to my pin settings so that the steps turned using the rotary encoder would show on the lcd, then I would be able to set a start point that the capacitor could return to when I used the rotary encoder press switch.
my main trouble is that at 70 yrs old its a bit daunting trying to get to grips with arduino code,
best regards
dave

11719. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-26 12:06:35 UTC
From: gm6jua@...
Topic: 11708 Message: 11719
Attachments: 1 described; binary payloads are missing from this source WARC

Hi Ray, firstly merry xmas to all at your side from Scotland.
I have just ordered the backpack for my 16x2 lcd (PCF8574f) type and attached my code for the stepper motor.
I would be really grateful to take up your offer to insert the code needed to show the number of steps on the lcd as I have absolutely no background in arduino type code
I can build a custom computer and trouble shoot it no problem but code is beyond me.
regards Dave
gm6jua@live.co.uk direct address

11720. Re: [loopantennas] loop antenna control [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-26 22:38:52 UTC
From: Phillips
Topic: 11708 Message: 11720

No worries Dave. I can learn something myself. I've never used a rotary encoder and your code will give me an insight.

I won't alter any of your existing code - just add the counter and LCD display.

Your code is for an "EasyDriver" stepper interface module. I don't have one of these modules and so won't be able to test final code with the hardware. This should not be too much of a coding problem because the LCD code is passive and does not communicate back to the control code.

Her indoors has organised me for a number of inter-year activities but I will get to your code in the mornings before she wakes up. I have a spare Arduino and LCD already to go on the breadboard.

Don't worry too much about inexperience with Arduino code - it is a pain. The Arduinos are nice but the designers chose to use C++ as the coding language. C++ is a powerful language but has a whole lot of eccentricities that makes it sometimes confusing, but always pedantic and inflexible. To that add thousands of young men and women who were born with a C++ manual in one hand and a soldering iron in the other all contributing to the open source environment and we get a web of differing techniques and standards that can sometimes make the simplest Arduino operation difficult. Once you work out what works and what doesn't, Arduino becomes a lot easier.

What coding environment are you using? Is your PC running Windows? What version? Most people use the Arduino IDE. I found setting it up for the first time to be confusing but it works sweetly once it is running.

What Arduino are you using?

All the best,

Ray

COLEMAK
The keyboard layout for rational thinkers
Standard with Mac, Linux & Android. Free for Windows
Training at http://thetypingcat.com/course/colemak
<http://www.michaelcapewell.com/projects/keyboard/layout_capewell-dvorak.htm>

From: loopantennas@yahoogroups.com <loopantennas@yahoogroups.com> on behalf of gm6jua@... [loopantennas] <loopantennas@yahoogroups.com>
Sent: Monday, 26 December 2016 10:36 PM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] loop antenna control [1 Attachment]

[Attachment(s) from gm6jua@... [loopantennas] included below]

Hi Ray,

firstly merry xmas to all at your side from Scotland.
I have just ordered the backpack for my 16x2 lcd (PCF8574f) type and attached my code for the stepper motor.
I would be really grateful to take up your offer to insert the code needed to show the number of steps on the lcd as I have absolutely no background in arduino type code
I can build a custom computer and trouble shoot it no problem but code is beyond me.
regards Dave
gm6jua@live.co.uk direct address

11721. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-29 23:42:17 UTC
From: Fred Moore
Topic: 11708 Message: 11721

Good evening Dave,

I too have pondered the same issue. The one that is the most important is to really know whether your capacitor is resonant above your receive frequency or below your receive frequency, so that you know which way to move the capacitor. The reason that I am pondering this is that I too have built an Octoloop (24 inches/side) for the LF - VLF range and it is to go on a pole out in the back yard which makes tuning the antenna much more difficult than if it were within arms reach. If the display could show even just an approx frequency of where the resonant freq is/was that would be better than not knowing where it was at all.

I like the Arduino approach. Can you keep me in touch with your progress?
Thanks and Happy New Year.

Fred - N4CLA

On 12/20/2016 12:39 PM, gm6jua@... [loopantennas] wrote:

Hi To the group,

I am building an octagonal loop and want to control the variable capacitor using an arduino

and a 4 wire bipolar stepper motor, so far I have a sketch to turn the motor 1 step at a time and another to use a potentiometer but I want to use an I2c lcd screen to show the number of steps moved ,however I have trolled the web with no success to find an example sketch that I can use to do this.

Have any of the group got such a sketch they could send me that would allow me to get tisworking.

thanks in advance

Dave gm6jua

11722. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-30 00:49:32 UTC
From: Joe Burch
Topic: 11708 Message: 11722

Fred,
One way to peel this onion (without crying) is to program the m/p to compute the frequency where the loop was last successfully tuned to resonance. Then, when it comes to re-tuning after a QSY, all the m/p has to do is to determine if the frequency is higher or lower and then move the capacitor in the proper direction. Trying to move the motor in the direction of decreasing SWR is a fools errand in that this approach will work only of the SWR is less that 8:1 (that was my experience).

Another way would be to 'sniff' the radio's frequency from the CI-V port, etc, etc. I did something like this with a Freescale chip a couple of years ago to automatically control an MFJ-1788 loop, but I stopped working on it because I couldn't get it to work properly over just the coax (had to provide a separate pair of wires for the motor).

I might go back to resurrect the first approach using a stepper motor, and re-code it for a PIC16f648A for which I have written a frequency counting routine that will work up to 40 Mhz.

see - Mag Loop
73's - Joe

|
| |
Mag Loop
| |

|

On Thursday, December 29, 2016 6:48 PM, "Fred Moore n40cla@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  Good evening Dave, I too have pondered the same issue. The one that is the most important is to really know whether your capacitor is resonant above your receive frequency or below your receive frequency, so that you know which way to move the capacitor. The reason that I am pondering this is that I too have built an Octoloop (24 inches/side) for the LF - VLF range and it is to go on a pole out in the back yard which makes tuning the antenna much more difficult than if it were within arms reach. If the display could show even just an approx frequency of where the resonant freq is/was that would be better than not knowing where it was at all. I like the Arduino approach. Can you keep me in touch with your progress?
Thanks and Happy New Year. Fred - N4CLA

On 12/20/2016 12:39 PM, gm6jua@... [loopantennas] wrote:

  Hi To the group, I am building an octagonal loop and want to control the variable capacitor using an arduino and a 4 wire bipolar stepper motor, so far I have a sketch to turn the motor 1 step at a time and another to use a potentiometer but I want to use an I2c lcd screen to show the number of steps moved ,however I have trolled the web with no

success to find an example sketch that I can use to do this. Have any of the group got such a sketch they could send me that would allow me to get tisworking. thanks in advance Dave gm6jua

11723. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-30 02:58:34 UTC
From: Richard (Rick) Karlquist
Topic: 11708 Message: 11723

On 12/29/2016 4:49 PM, Joe Burch k3jls@... [loopantennas] wrote:>
> Good evening Dave,
> I too have pondered the same issue. The one that is the most important
> is to really know whether your capacitor is resonant above your receive
> frequency or below your receive frequency, so that you know which way to
> move the capacitor. The reason that I am pondering this is that I too

There is a straightforward solution to this problem that was
first published at least 60 years ago: insert a phase discriminator
in series with the feedline close to the antenna. The phase
discriminator will generate a DC voltage having a polarity
indicating whether the loop is tuned above or below resonance.
You can use this to automatically tune the capacitor, or just
use the DC voltage as an indicator of which way to manually
move the capacitor. For further reading see, for example,:

http://k6jca.blogspot.com/2015/07/antenna-auto-tuner-design-part-6-notes.html

K6JCA has done a nice job here of collecting a bunch of obscure
articles into a comprehensive summary. Lots of references to
other articles.

Rick N6RK

11724. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-30 03:25:08 UTC
From: Joe Burch
Topic: 11708 Message: 11724

Hey there - I tried this, and it didn't work with a mag loop when the loop is significantly out of resonance (when the coupling between the feed loop and the mag loop itself breaks down). Perhaps someone else can get it to work :-)

Joe

On Thursday, December 29, 2016 9:58 PM, "'Richard (Rick) Karlquist' richard@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  On 12/29/2016 4:49 PM, Joe Burch k3jls@verizon.net [loopantennas] wrote:>
> Good evening Dave,
> I too have pondered the same issue. The one that is the most important
> is to really know whether your capacitor is resonant above your receive
> frequency or below your receive frequency, so that you know which way to
> move the capacitor. The reason that I am pondering this is that I too

There is a straightforward solution to this problem that was
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in series with the feedline close to the antenna. The phase
discriminator will generate a DC voltage having a polarity
indicating whether the loop is tuned above or below resonance.
You can use this to automatically tune the capacitor, or just
use the DC voltage as an indicator of which way to manually
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http://k6jca.blogspot.com/2015/07/antenna-auto-tuner-design-part-6-notes.html

K6JCA has done a nice job here of collecting a bunch of obscure
articles into a comprehensive summary. Lots of references to
other articles.

Rick N6RK

11725. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-30 05:21:11 UTC
From: Richard (Rick) Karlquist
Topic: 11708 Message: 11725

On 12/29/2016 7:25 PM, Joe Burch k3jls@... [loopantennas] wrote:
>
>
> Hey there - I tried this, and it didn't work with a mag loop when the
> loop is significantly out of resonance (when the coupling between the
> feed loop and the mag loop itself breaks down). Perhaps someone else
> can get it to work :-)
>
> Joe
>

Yes, I can see where that might not work when you don't have a direct connection to the loop. Might be a reason to change to a direct connection type of matching network.

Rick N6RK

11726. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-30 12:36:13 UTC
From: Joe Burch
Topic: 11708 Message: 11726

Hi Rick - I tried this with a gamma match to the loop. If memory serves, this didn't work either.
Joe

On Friday, December 30, 2016 12:21 AM, "'Richard (Rick) Karlquist' richard@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

On 12/29/2016 7:25 PM, Joe Burch k3jls@... [loopantennas] wrote:
>
>
> Hey there - I tried this, and it didn't work with a mag loop when the
> loop is significantly out of resonance (when the coupling between the
> feed loop and the mag loop itself breaks down). Perhaps someone else
> can get it to work :-)
>
> Joe
>

Yes, I can see where that might not work when you don't have a direct connection to the loop. Might be a reason to change to a direct connection type of matching network.

Rick N6RK

11727. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-30 16:51:59 UTC
From: gm6jua@...
Topic: 11708 Message: 11727

Hi Fred, the idea behind the nema stepper motor is that I set it up to micro step so that when I step it using a rotary encoder and the arduino I get 6400 steps per revolution (stepper has 0.9 degree steps)
using an lcd screen saves using the arduino ide to monitor the steps taken.
all you need to do then is go through the bands you want to use and note the steps needed for resonance .
if you first set up a start point at 0 steps all you need to do when wanting to start using the loop is return to the zero step point by pressing the encoder button function then increase the steps to the number needed then as you change band/frequency either increase or decrease the steps to the required number.
send me your direct e-mail and I'll keep you posted
regards
dave

11728. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-30 16:58:54 UTC
From: Fred Moore
Topic: 11708 Message: 11728

Morning Joe,

I want to reiterate that this is NOT a Mag loop for T/R it is just a Rx loop, called an Octoloop for receiving the LF/VLF region. Having an extra set of wiring to the antenna is not a problem. I am currently using a FLEX 1500, and recently won an IC-7300 in a raffle that I have not tried in that part of the spectrum. Currently I have an analog stepper motor control for my capacitor using a belt and pulley, but would like to change it to a digital control direct drive where I can count the steps. I think that if I knew the step count and could correlate it to frequency, I would then know, looking at a chart, whether I was above or below the desired frequency, thus now moving the cap in the correct direction. Since this would be computed by some form of micro p, a display could possibly be added as well.

Just some thought provoking ideas.

Fred - N4CLA

On 12/29/2016 7:49 PM, Joe Burch k3jls@... [loopantennas] wrote:

Fred,

One way to peel this onion (without crying) is to program the m/p to compute the frequency where the loop was last successfully tuned to resonance. Then, when it comes to re-tuning after a QSY, all the m/p has to do is to determine if the frequency is higher or lower and then move the capacitor in the proper direction. Trying to move the motor in the direction of decreasing SWR is a fools errand in that this approach will work only of the SWR is less that 8:1 (that was my experience).

Another way would be to 'sniff' the radio's frequency from the CI-V port, etc, etc. I did something like this with a Freescale chip a couple of years ago to automatically control an MFJ-1788 loop, but I stopped working on it because I couldn't get it to work properly over just the coax (had to provide a separate pair of wires for the motor).

I might go back to resurrect the first approach using a stepper motor, and re-code it for a PIC16f648A for which I have written a frequency counting routine that will work up to 40 Mhz.

see - Mag Loop (http://k3jls.net/mlc.html)

73's - Joe

Mag Loop

(http://k3jls.net/mlc.html)

On Thursday, December 29, 2016 6:48 PM, "Fred Moore n40cla@... [loopantennas]" wrote:

Good evening Dave,

I too have pondered the same issue. The one that is the most important is to really know whether your capacitor is resonant above your receive frequency or below your receive frequency, so that you know which way to move the capacitor. The reason that I am pondering this is that I too have built an Octoloop (24 inches/side) for the LF - VLF range and it is to go on a pole out in the back yard which makes tuning the antenna much more difficult than if it were within arms reach. If the display could show even just an approx frequency of where the resonant freq is/was that would be better than not knowing where it was at all.

I like the Arduino approach. Can you keep me in touch with your progress?
Thanks and Happy New Year.

Fred - N4CLA

On 12/20/2016 12:39 PM, gm6jua@... [loopantennas] wrote:

Hi To the group,

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and a 4 wire bipolar stepper motor, so far I have a sketch to turn the motor 1 step at a time and another to use a potentiometer but I want to use an I2c lcd screen to show the number of steps moved ,however I have trolled the web with no success to find an example sketch that I can use to do this.

Have any of the group got such a sketch they could send me that would allow me to get tisworking.

thanks in advance

Dave gm6jua

11729. Graham Maynard coax Voltage feed.

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-31 02:58:23 UTC
From: J Ferrow
Topic: 11729 Message: 11729

Hi,
I just finished up a version of Graham Maynards active loop antenna and would like to feed the 12 volts to the circuit via the Coax line. I'm using the same voltage feed that I use for my mini-whip antenna to put the 12 volts on the coax. On Graham Maynards loop the first thing the voltage sees is the primary of the transformer i.e. dead short. Should I place a capacitor in series with the winding and center conductor of the coax to block the DC?? what value would be best if that's the case. I have a blocking inductor between the coax center conductor and the 12V rail of the circuit to block any signals coming back through the transformer. Thanks and happy new year to all!!
John

11730. Re: loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-31 17:19:31 UTC
From: mrk_muller@...
Topic: 11708 Message: 11730

Hello Dave,

It may be that someone else has already done most of what you want. I was wondering if you are aware of this Yahoo group: https://groups.yahoo.com/neo/groups/loopController/info https://groups.yahoo.com/neo/groups/loopController/info

(Magnetic Loop Controller group or loopController group)

They have an arduino board set up for stepper motor control to tune a magnetic loop. It uses SWR sensing and frequency feedback from the radio. The group has been around for quite some time, and the operation of the hardware and software has been thoroughly tested. You may find the code/sketch you need in the files for that group. Or you might opt to buy the circuit board from Loftur (who manages the group), populate it, and then dump the code from that group into that hardware and go from there.

Regards ... Mark. N5KNG

11731. RE: [loopantennas] Graham Maynard coax Voltage feed.

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-31 10:04:37 UTC
From: <g8lco10@...>
Topic: 11729 Message: 11731
Attachments: 1 described; binary payloads are missing from this source WARC

John
Disconnect the transformer secondary lead that goes to ground, re-connect to the positive supply in the amplifier. Not very difficult.

Alan
G8LCO.

Sent from Mail for Windows 10

From: J Ferrow ferrox4@... [loopantennas]
Sent: Saturday, December 31, 2016 3:01 AM
To: Loop Antennas
Subject: [loopantennas] Graham Maynard coax Voltage feed.

Hi,
I just finished up a version of Graham Maynards active loop antenna and would like to feed the 12 volts to the circuit via the Coax line. I'm using the same voltage feed that I use for my mini-whip antenna to put the 12 volts on the coax. On Graham Maynards loop the first thing the voltage sees is the primary of the transformer i.e. dead short. Should I place a capacitor in series with the winding and center conductor of the coax to block the DC?? what value would be best if that's the case. I have a blocking inductor between the coax center conductor and the 12V rail of the circuit to block any signals coming back through the transformer. Thanks and happy new year to all!!

John

11732. Airdux FSL Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-31 21:34:01 UTC
From: Jordan Dobrikin
Topic: 11732 Message: 11732

Hi
Has anyone experimented with open air coils stuffed with ferite rods?
73 de Jordan ve7jjd

[image:
Nice-Big-Unused-2-5-034-diam-Air-Dux-Coil-f-Old-Ham-Radio-Tube-Transmitter-Tuner]
--
73 Jordan VE7JJD

11733. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2016-12-31 23:16:15 UTC
From: crabtreejr@...
Topic: 11708 Message: 11733

Hello Rick

Thanks for the interesting link, and its useful references.

Pat Hawker, G3VA mentioned this issue in his Technical Topics column in the RSGB's Radcom, August 1989 Dick Kelsall, G4FM, had written to Pat discussing how he tuned his I1ARZ typ magnetic loop. Dick used his loop on three bands, and had coarse indication of the position of the tuning capacitor from a potentiometer which was mounted on it. However to get an indication of which way to tune within the bands he "introduced a phase detector into the coax feed..." It was made from an old SWR meter.

He did not say where he located the phase detector. I have always assumed that it was in the shack. Wouldn't one see a rapid change in the phase angle as you passed through the resonance point, regardless of the length of the transmission line? I need to think about this.

73 John KC0G

On 12/29/2106, 'Richard (Rick) Karlquist' richard@... wrote:

On 12/29/2016 4:49 PM, Joe Burch k3jls@... [loopantennas] wrote:>
> Good evening Dave,
> I too have pondered the same issue. The one that is the most important
> is to really know whether your capacitor is resonant above your receive
> frequency or below your receive frequency, so that you know which way to
> move the capacitor. The reason that I am pondering this is that I too

There is a straightforward solution to this problem that was
first published at least 60 years ago: insert a phase discriminator
in series with the feedline close to the antenna. The phase
discriminator will generate a DC voltage having a polarity
indicating whether the loop is tuned above or below resonance.
You can use this to automatically tune the capacitor, or just
use the DC voltage as an indicator of which way to manually
move the capacitor. For further reading see, for example,:

http://k6jca.blogspot.com/2015/07/antenna-auto-tuner-design-part-6-notes.html

K6JCA has done a nice job here of collecting a bunch of obscure
articles into a comprehensive summary. Lots of references to
other articles.

Rick N6RK

11734. Re: [loopantennas] loop antenna control

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-01 02:19:08 UTC
From: Richard (Rick) Karlquist
Topic: 11708 Message: 11734

On 12/31/2016 3:16 PM, crabtreejr@... [loopantennas] wrote:
>

> He did not say where he located the phase detector. I have always
> assumed that it was in the shack. Wouldn't one see a rapid change in
> the phase angle as you passed through the resonance point, regardless of
> the length of the transmission line? I need to think about this.
>
> 73 John KC0G
>

The general answer is that you would need to located the phase detector adjacent to the antenna. However, if the transmission line is less than 1/8 wavelength at the highest frequency of interest, you might still get a useful results if you locate it at the shack end.

If you use a longer line, you will see resonances that are a combination of the the line and the load. It may be that the rate of change of phase (AKA as group delay) peaks at the resonant frequency of the loop. However, that is no help if you are way off resonance and don't know which way to tune. The noise will always peak at loop resonance anyway, so you don't need the phase detector when close to resonance.

A simple way to match a loop is to connect the loop in series with the variable tuning capacitor, and connect this series combination to the output of the phase detector. The feedline goes to the input of the phase detector. There is also a fixed capacitor in shunt with the input of the phase detector.

For example, if the loop drive resistance is 1 ohm, the reactance of the shunt capacitor should be -j7 ohms, to match to 50 ohms.

In this case, the phase detector will tell you which way to tune when way off frequency, but would not indicate zero phase at resonance. You would need a second phase detector ahead of the shunt capacitor to do that.

In retrospect, the digital turns counter seems like the way to go. Several vendors already make these things for screwdriver antennas.

Rick N6RK

11735. Re: [loopantennas] Airdux FSL Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-01 02:22:48 UTC
From: vk2tti@...
Topic: 11732 Message: 11735

Jordan, I have used a single ferrite rod to tune an air wound coil by moving the rod in and out. It seems to me a waste of rods to stuff the coil fully. The outer rods will shield the inner rods. That Russian sleeve of ferrite rods, perhaps realises this. Regards for the new year vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
"Loop Antennas" <loopantennas@yahoogroups.com>, "primetimeshortwave" <primetimeshortwave@yahoogroups.com>, "shortwave-radio" <shortwave-radio@yahoogroups.com>, "shortwave-swl-antenna" <shortwave-swl-antenna@yahoogroups.com>, "Shortwaveradios" <shortwaveradios@yahoogroups.com>, "ultralightdx" <ultralightdx@yahoogroups.com>
Cc:

Sent:
Sat, 31 Dec 2016 13:34:01 -0800
Subject:
[loopantennas] Airdux FSL Antenna

Hi
Has anyone experimented with open air coils stuffed with ferite rods?
73 de Jordan ve7jjd

--
73 Jordan VE7JJD

Email sent using Optus Webmail

Links:
---
[1] https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11732;_ylc=X3oDMTJybjZocGc0BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTczMgRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0ODMyMjAwNDM-?act=reply&messageNum=11732
[2] mailto:jjdobrikin@...?subject=Re%3A%20Airdux%20FSL%20Antenna
[3] mailto:loopantennas@yahoogroups.com?subject=Re%3A%20Airdux%20FSL%20Antenna
[4] https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmamZydXFwBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN

0aW1lAzE0ODMyMjAwNDM-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11732;_ylc=X3oDMTM3ZnFmNm5yBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTczMgRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0ODMyMjAwNDMEdHBjSWQDMTE3MzI-
[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmY3BycHVsBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0ODMyMjAwNDM-
[11]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnMXRwbzQ5BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDgzMjIwMDQz
[12]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlaGhzZXJoBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ4MzIyMDA0NA--
[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11736. RE: [loopantennas] Graham Maynard coax Voltage feed. [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-01 08:51:45 UTC
From: <g8lco10@...>
Topic: 11729 Message: 11736
Attachments: 1 described; binary payloads are missing from this source WARC

John,
The secondary winding is the one connected to the coax inner. Disconnect the grounded end of this winding and take it to the amplifier +ve. Connect the coax screen to the negative line on the amplifier.

Power going down the coax then passes to the amplifier through the transformer output winding. The amplifier negative connection then returns via the screen of the coax.

HNY
Alan
G8LCO

Sent from Mail for Windows 10

From: g8lco10@yahoo.co.uk [loopantennas]
Sent: Saturday, December 31, 2016 8:38 PM
To: J Ferrow ferrox4@... [loopantennas]
Subject: RE: [loopantennas] Graham Maynard coax Voltage feed. [1 Attachment]

[Attachment(s) from g8lco10@yahoo.co.uk included below]
John
Disconnect the transformer secondary lead that goes to ground, re-connect to the positive supply in the amplifier. Not very difficult.

Alan
G8LCO.

Sent from Mail for Windows 10

From: J Ferrow ferrox4@... [loopantennas]
Sent: Saturday, December 31, 2016 3:01 AM
To: Loop Antennas
Subject: [loopantennas] Graham Maynard coax Voltage feed.

Hi,
I just finished up a version of Graham Maynards active loop antenna and would like to feed the 12 volts to the circuit via the Coax line. I'm using the same voltage feed that I use for my mini-whip antenna to put the 12 volts on the coax. On Graham Maynards loop the first thing the voltage sees is the primary of the transformer i.e. dead short. Should I place a capacitor in series with the winding and center conductor of the coax to block the DC?? what value would be best if that's the case. I have a blocking inductor between the coax center conductor and the 12V rail of the circuit to block any signals coming back through the transformer. Thanks and happy new year to all!!

John

11737. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-01 14:27:16 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11737

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11738. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-01 14:27:16 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11738

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11739. Fwd: [ultralightdx] Happy Ultralight New Year (Read at Own Risk)

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-01 20:22:13 UTC
From: Jordan Dobrikin
Topic: 11739 Message: 11739

Hi
This is a week late.
73 de Jordan ve7jjd

---------- Forwarded message ----------
From: Michael michael.setaazul@... [ultralightdx] <
ultralightdx@yahoogroups.com>
Date: Sun, Jan 1, 2017 at 10:22 AM
Subject: Re: [ultralightdx] Happy Ultralight New Year (Read at Own Risk)
To: ultralightdx@yahoogroups.com

Happy Trans-Oceanic Year to you and all, Gary.

MichaelUK

PS: Your metre closely matches that evidentially required
for a Nobel Prize for Literature...

--
73 Jordan VE7JJD

11740. Re: [loopantennas] Graham Maynard coax Voltage feed. [1 Attachment]

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-02 02:39:07 UTC
From: ferrox4@...
Topic: 11729 Message: 11740

Thanks for the great info Alan. I modified the circuit per your instructions and have it on a temporary small loop. It works great!! Thanks again. Happy New Year to all.

John. Ki4ucw in Fla.

Sent from my iPhone

> On Jan 1, 2017, at 3:51 AM, g8lco10@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> [Attachment(s) from g8lco10@... included below]
> John,
>
> The secondary winding is the one connected to the coax inner. Disconnect the grounded end of this winding and take it to the amplifier +ve. Connect the coax screen to the negative line on the amplifier.
>
>
>
> Power going down the coax then passes to the amplifier through the transformer output winding. The amplifier negative connection then returns via the screen of the coax.
>
>
>
> HNY
>
> Alan
>
> G8LCO
>
>
>
> Sent from Mail for Windows 10
>
>
>
> From: g8lco10@... [loopantennas]
> Sent: Saturday, December 31, 2016 8:38 PM
> To: J Ferrow ferrox4@... [loopantennas]
> Subject: RE: [loopantennas] Graham Maynard coax Voltage feed. [1 Attachment]
>
>
>
>
>
> [Attachment(s) from g8lco10@... included below]

>
> John
>
> Disconnect the transformer secondary lead that goes to ground, re-connect to the positive supply in the amplifier. Not very difficult.
>
>
>
> Alan
>
> G8LCO.
>
>
>
> Sent from Mail for Windows 10
>
>
>
> From: J Ferrow ferrox4@... [loopantennas]
> Sent: Saturday, December 31, 2016 3:01 AM
> To: Loop Antennas
> Subject: [loopantennas] Graham Maynard coax Voltage feed.
>
>
>
>
>
> Hi,
>
> I just finished up a version of Graham Maynards active loop antenna and would like to feed the 12 volts to the circuit via the Coax line. I'm using the same voltage feed that I use for my mini-whip antenna to put the 12 volts on the coax. On Graham Maynards loop the first thing the voltage sees is the primary of the transformer i.e. dead short. Should I place a capacitor in series with the winding and center conductor of the coax to block the DC?? what value would be best if that's the case. I have a blocking inductor between the coax center conductor and the 12V rail of the circuit to block any signals coming back through the transformer. Thanks and happy new year to all!!
>
>
>
> John
>
>
>
>
>
>
>

11741. Spy Radios

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-04 22:08:39 UTC
From: Jordan Dobrikin
Topic: 11741 Message: 11741

Hi
For Sony's: Bedside Reading & }No Antennas!{
For ultralites: What Radio(s) for modern days espionage?
For Antennas: What Antenna(s) best for Stealth & or Improved Reception?
BTW Happy New Year
73 de Jordan VE7JJD

http://cryptomuseum.com/spy/icf2001d/index.htm

Homepage Crypto Spy radio Stay-Behind Receivers
[Follow cryptomuseum on Twitter] [Watch cryptomuseum on YouTube]
Sony ICF-2001D
Portable short-wave receiver
The ICF-2001D was a portable solid-state LW, MW, SW and FM receiver, also known as a world receiver, made by Sony in Japan around 1980. Although it was a commercially available civil-class receiver, used by many people world-wide, it played an important role in international espionage.
The ICF-2001D measures less than 29 x 16 x 5 cm and is powered by two AA-size cells and three D-size cells. It has a built-in telescopic antenna at the top and a digital readout at the front. The device is commonly operated on its back, tilted by a bracket at the rear. This gives the optimum viewing angle for the LCD display.
The ICF-2001 can be powered by an external 4.5V DC adapter, or by the internal batteries. Alternatively, a 12V adapter cable was available to allow the radio to be used in a car. It was available in 3 different basic versions (types) [1].
Sont ICF-2001D
Furthermore, there were at least five country-specific models, each with their own frequency ranges. The device fully covers the LW and MW broadcast bands in AM, plus the VHF FM broadcast band (87-108 MHz). But the actual purpose of this radio is the Short Wave band (SW) that is divided in 13 segments from 2250 kHz (120 m) to 26.100 MHz (11 m). Unlike modern general coverage receiver, the SW band is not contiguous. It has small gaps in between the band segments and covers neither the regular amateur radio bands nor the 27 MHz (11 m) CB band.
This problem was solved in the later ICF-7600D that was introduced in 1983 and the slightly improved ICF-7600DS (1986), both of which have a general coverage from 153 kHz to 30 MHz (except for the German version which stops at 26.1 MHz). They too were used in espionage.
Sony ICF-2001D Sont ICF-2001D Operating the large tuning dial Operating the tuning dial with the index finger Close-up of the displays Tilt bracket at the rear Left side view Right side view
World receiver
Radio's like the Sony ICF-2001D and the Grundig Satellit 2000 were very popular in the 1980s. During the summer holidays in a far away country, it

allowed people to listen to the international broadcasts of their home country. In those days, most countries operated such a service on the SW bands, for example the BBC World Service. From the early 2000s onwards, most countries have gradually phased out their SW broadcasts, although the BBC World Service has remained in operation on analogue and digital platforms, broadcasting 24 hours a day in 28 languages [5].

FUNF, DREI, SIEBEN, ACHT, VIER...

Radio amateurs and SW-listeners will probably remember the mysterious number stations on the SW bands. A female voice that was reading endless sequences of seemingly random numbers for 24 hours a day, often in German or Russian. During the Cold War, many such numbers stations were operated by the secret services of the former Eastern Block countries, such as Russia (USSR), East Germany (DDR), Hungary, Czechoslovakia and Romania. The numbers were actually coded messages for their secret agents and spies that operated undercover in the west. In many cases the agent used a commercial receiver like the ICF-2001D for the reception of such messages.

Controls

The ICF-2001D has a clear and well-organised control panel that is located at the front of the unit or actually at the top when it is placed horizontally on the table. The main power switch is at the left side, with an additional switch to the left of the display. It also allows timer operation. The display consists of three sections: the real-time clock (left), the frequency readout (centre) and a signal strength indicator (right). The frequency tuning dial is in the upper right corner. it can be operated from the top as well as from the right. A slider at the right edge controls the volume.

Controls and connections on the ICF-2001D

The largest part of the control panel is taken by the keypad which roughly consists of five sections. The 32 black keys at the centre serve two purposes. They may be used to directly select one of the memory presets (8 presets divided over 4 banks). In combination with the blue shift button at the bottom left, these keys are also use to select the desired frequency band.

Above the black preset buttons are the MODE selectors. They allow selection between the FM and AM bands. In AM mode, the remaining buttons are used to select the desired modulation type (wide, narrow, sync, USB, LSB and CW). The row of brown keys just below the display are used for timer operation. The three white buttons at the left are used to activate scanning. The 11 white keys at the right can be used to enter the desired frequency directly.

Frequency bands

The ICF-2001D covers most broadcast bands on Long Wave (LW), Medium Wave (MW), Short Wave (SW) and Ultra Short Wave (here called FM).1 On some models even the Air Band is available.

LW : 150 - 285 kHz, in 3 kHz steps

MW: 531 - 1620 kHz, in 9 kHz steps; 530 - 1620 kHz, in 10 kHz steps

SW: 120 m, 2250 - 2550 kHz; 90 m, 3150 - 3450 kHz; 75 m, 3850 - 4050 kHz; 60 m, 4700 - 5110 kHz; 49 m, 5900 - 6250 kHz; 41 m, 7000 - 7400 kHz; 31 m, 9400 kHz - 10 MHz; 25 m, 11.500 - 12.150 MHz; 21 m, 13.500 - 13.900

MHz;
19 m, 15 - 15.700 MHz; 16 m, 17.450 - 18 MHz; 13 m, 21.350 - 21.950 MHz;
11 m, 25.570 - 26.100 MHz
FM: 76 - 108 MHz in 50 kHz steps (type 1) 87.5 - 108 MHz in 50 kHz
(type 2)
AIR: 116-136 MHz (AM) in 25 kHz steps 2
The Ultra Short Wave band (76-108 MHz) is officially designated the
Very High Frequency band (VHF), but is better known as FM (Frequency
Modulation) after the wide-band modulation art that is commonly used in
this broadcast band.
The AIR band is just above the FM broadcast band and is only available on
certain models. AIR broadcasts are generally in AM (Amplitude Modulation).
The Red Colonel
The ECF-2001D as a spy tool
Due to its small size, its high sensitivity and the fact that it was
battery powered, the ICF-2001D was often the receiver of choice for
East-European spies operating in West-European countries during the Cold
War. In many cases, Eastern-Block espionage agencies, such as the KGB, the
GRU and the Stasi, gave their western spies money in order to buy such a
receiver in a local shop.
The receiver was used by the spy to listen to the East-European number
stations that operated on the Short-Wave band (SW). Hidden in the numbers
were secret messages and instructions for the spy, that were encrypted with
the unbreakable One-Time Pad. Once the spy had decoded his message, he
would destroy it and carry out his mission. Messages were sent back to the
spy control centre by means of a courier, dead letterboxes or a clandestine
spy radio transmitter.
An example of the use of this radio is the case of Guy Binet (1934-2000), a
colonel of the Belgian Army, who was recruted in 1986 by the Soviet
Military Intelligence Service, the GRU. On the first meeting in Vienna with
his handler, GRU General Glazkov, he is given a Minox EC spy camera.
He uses the camera to photograph secret NATO documents and delivers the
films to the Russians in Vienna in January 1987. That week he is also
trained in deciphering secret radio messages. He receives a One-Time Pad
cipher table {hidden in black Snowman marker) and a frequency table.
ICF-2001D, Minox EC and one-time pad [What is this?]
He is also given a large sum of money and is instructed to buy a Sony
ICF-2001D on his return to Belgium [3]. Every second and forth Tuesday of
each month, Binet listens to the coded messages that are transmitted by the
mysterious number stations on the short wave radio bands.
Sadly for Binet, the American Intelligence Agency CIA has photographed his
first meeting with Glaskov in Vienna [3] and tips-off their Belgian
colleagues of the SDRA III, after which Binet is arrested. By that time
however, Binet has been spying for the Soviets for more than two years. He
becomes known as The Red Colonel [4] and is eventually sentenced to 20
years of forced labour and military degradation. After five years in prison
he is released on parole and dies in July 2000.
➤ More about Binet's Minox EC camera
Attencion!

Spying for the Cubans

Another example of the use of the ICF-2001D in international espionage, is a series of cases against US citizens between 2001 and 2009. In each case, the subject(s) had been spying for Cuba, and the FBI found a Sony ICF-2010 (the US version of the ICF-2001D) in their homes.

The first case is that of Ana Belén Montes (28 February 1957) who worked for the US Defence Intelligence Agency (DIA) as its most senior Cuban analyst [6]. She had been spying for Cuba since 1985 until her arrest in 2001, during which time she had passed numerous documents and sensitive military information to the Cubans.

Prior to her arrest on 21 September 2001, the FBI had searched her appartment and found evidence of the use of One-Time Pade (OTP) messages on her laptop. Also present in the appartment was a functional Sony short-wave receiver that was used to receive OTP messages from the Cuban Numbers Station on 7887 kHz.

Evidence for this was found on her Toshiba laptop. Although she had clearly been instructed by the Cuban Intelligence Service, the CuIS, to run a special program to wipe the data from her laptop after use, she had failed to do so [7][8]. As a result, the FBI was able to retrieve a large OTP message, consisting of 150 5-digit groups.

Ana Belén Montes, FBI mugshot. 21 September 2001. [What is this?]

According to author Keith Melton, who is a well-informed US intelligence source, Montes used a Sony ICF-2010 [9], which is the US equivalent of the ICF-2001D featured here. In a detailed paper of 2010, researcher Dirk Rijmenants explains how the FBI managed to break the seemingly unbreakable OTP cipher due to flaws in the Cuban procedures [8]. After pleading guilty to spying, Montes was sentenced in October 2002 to 25 years in prison without the chance of parole [1].

Similar cases are those of Carlos and Elsa Alvarez (caught in 2006 after spying for 30 years), Marta Rita Velazquez, Gerardo Hernández (one of the Cuban Five) and Walter Kendall Myers and his wife Gwendolyn Steingraber Myers (arrested in 2009 after spying for nearly 30 years). In all cases, the ICF-2001D was used to receive the coded messages from Cuba's Attención Station. Interested in more stories? Check out the FBI 100 [10] or the website Cuba Confidential [11].

➤ Dirk Rijmenents' paper about the Cuban cases

References

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Further information : Other Sony short-wave receivers; Other spy radio sets ; Index of spy radio sets; More about number stations
Any links shown in red are currently unavailable. If you like the information on this website, why not make a donation?
© Crypto Museum. Last changed: Friday, 11 September 2015 - 10:02 CET.

11742. initial obeservations and questions Re: Graham Maynard 6X6 loop.....

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-06 00:42:05 UTC
From: J Ferrow
Topic: 11742 Message: 11742

Not bad, but not great either. it's good on MW and 160khz all the way to 7 MHZ about where sensitivity starts to fall off, but it's a bit noisy from 150khz to the AM BCB where i am most interested in. It does receive the long wave broadcast stations well, but the backround buzzing noise does get annoying. I did not connect the center tap portion of the transformer to the mid way point on the loop, but instead just left it grounded. Would not connecting the center tap cause this antenna to be noisey?? Also too big a loop and it overloads hearing many BCB stations in the LW spectrum. I have a wellbrook ana-100LN on the way and am looking forward to comparing the two. Any suggestions for optimizing the Graham Maynard loop?? Do multiple turns on the loop make a difference in operation vs. just one turn?? I understand more antenna in the air, but does it matter much when the spacing of the multiple turns is so close?? Thanks for reading.
Happy 2017!!, John in FLA

11743. fs: Flex 6300/Icom 7800/Icom PW1/Elecraft k3

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-09 06:56:42 UTC
From: larry.rj73@...
Topic: 11743 Message: 11743

;'
Email: k4leo.e@gmail.com
Anan 200D: $2600, ANAN-100D SDR: $1,250
Yaesu FTDX 5000MP: $2,600, Yaesu FTDX-3000: $1,500
Flex 5000A: $1,600, Flex 6500: $2,500, Flex 6300:$1,800
Icom PW1: $2,200 , Icom 7600: $1800 , Icom 7800: $3,600
Alpha 9500 $4,000 , Alpha 8410 with 4CX1000A tubes: $2,600
ACOM 2000A: $3900 ,Acom 1000 Amp : $1,600
Elecraft k3: $1800, Elecraft KX3: $1600
Ameritron AL-1500: $1700 ,Ameritron AL-82: $1,300
Commander 2500: $1,400
Ten-Tec Orion II
Kenwood TS-2000LE,Kenwodd TS-950SDX,Kenwood TS 990
SteppIR 4 Element

Thanks,
Email: k4leo.e@gmail.com
K4LEO
WILLIAM E HENDERSON
TX 76518
73

11744. Re: [loopantennas] fs: Flex 6300/Icom 7800/Icom PW1/Elecraft k3

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-11 05:38:12 UTC
From: Andy
Topic: 11743 Message: 11744

I wonder if William Henderson K4LEO knows he is selling all this hardware.

;-)

11745. RE: [loopantennas] Digest Number 2817

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-12 04:27:24 UTC
From: Hubert Miller
Topic: 11745 Message: 11745

This criminal tries this on multiple groups every few months. QRZ.com says licensed since 1-06-2017. Oh, right!

Re: fs: Flex 6300/Icom 7800/Icom PW1/Elecraft k3 <https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11744;_ylc=X3oDMTJzbnFxZmNmBF9TAzk3MzU5NzE1BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTc0NARzZWMDZG1zZwRzbGsDdm1zZwRzdGltZQMxNDg0MTI1MzU1>
Tue Jan 10, 2017 9:38 pm (PST) . Posted by:
"Andy" ingrahama <mailto:ai.egrps@...?subject=Re%3A%20fs%3A%20Flex%206300%2FIcom%207800%2FIcom%20PW1%2FElecraft%20k3>
I wonder if William Henderson K4LEO knows he is selling all this hardware.

11746. Re: [loopantennas] Digest Number 2817

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-12 05:47:29 UTC
From: Andy
Topic: 11745 Message: 11746

Hubert Miller wrote:

"This criminal tries this on multiple groups every few months. QRZ.com says licensed since 1-06-2017. Oh, right!"

That was the date of his address change.

His General license was renewed in 2015, and in 2005. Before 2005, I can't tell. I think it was not in the ULS before then.

Andy

11747. Fwd: The Bagpiper

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-24 22:12:29 UTC
From: Jordan Dobrikin
Topic: 11747 Message: 11747

---------- Forwarded message ----------
From: Jordan Dobrikin <jjdobrikin@...>
Date: Tue, Jan 24, 2017 at 1:57 PM
Subject: Re: The Bagpiper
To: "poikaa3 ." <poikaarod@...>

Hi
Are Scot or Irish?
My wife was Scot, a lowlander, no Tartan
73 de Jordan ve7jjd

On Tue, Jan 24, 2017 at 1:00 PM, poikaa3 . <poikaarod@...> wrote:

> *Time is like a river.*
> *You cannot touch the water twice, because the flow that has passed will
> never pass again. Enjoy every moment of life.*
>
> *As a bagpiper, I play many gigs. Recently I was asked by a funeral
> director to play at a graveside service for a homeless man. *
> *He had no family or friends, so the service was to be at a pauper's
> cemetery in the Nova Scotia back country.*
> *As I was not familiar with the backwoods, I got lost and, being a typical
> man, I didn't stop for directions.* *I finally arrived an hour late and
> saw the funeral guy had evidently gone and the hearse was nowhere in sight.
> There were only the diggers and crew left and they were eating lunch. I
> felt badly and apologized to the men for being late.*
>
> *I went to the side of the grave and looked down and the vault lid was
> already in place. I didn't know what else to do, so I started to play.*
> *The workers put down their lunches and began to gather around. I played
> out my heart and soul for this man with no family and friends.*
> *I played like I've never played before for this homeless man.*
> *And as I played "Amazing Grace", the workers began to weep. They wept, I
> wept, we all wept together.*
>
> *When I finished, I packed up my bagpipes and started for my car. Though
> my head was hung low, my heart was full.*
> *As I opened the door to my car, I heard one of the workers say, "I
> never seen anything like that before, and I've been putting in septic tanks
> for** twenty years."*
>
> *Apparently, I'm still lost....it's a man thing.*
>
>
> *When you have stopped laughing be sure to forward this on to others who
> would enjoy a good story.*

>
>
>
> 73 Rod KB8DNS
>

--
73 Jordan VE7JJD

--
73 Jordan VE7JJD

11748. Loop Antennas with Antenna Jacks

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-25 08:05:24 UTC
From: jjdobrikin@...
Topic: 11748 Message: 11748

Hi
I am looking for the Schematics of the Select A Tenna with Antenna Jack, as well as the Terk and Tecsun Loop Antennas.
I am trying to figure out how best to use them with multi Inductor Crystal Radio ensemble.
I am looking at Variometers, Variocouplers as well as a ferrite Loop to be driven by a C.Crane Twin coil mounted outside on an Antenna rotator.
73 de Jordanve7jjd

11749. Re: [loopantennas] Loop Antennas with Antenna Jacks

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-25 16:27:48 UTC
From: Jean-L. RAULT
Topic: 11748 Message: 11749

Hi Jordan

How many MW transmitters do you still have in Canada ?

Jean-Louis F6AGR

Le 25/01/2017 à 08:05, jjdobrikin@... [loopantennas] a écrit :
>
> Hi
>
> I am looking for the Schematics of the Select A Tenna with Antenna
> Jack, as well as the Terk and Tecsun Loop Antennas.
>
> I am trying to figure out how best to use them with multi Inductor
> Crystal Radio ensemble. I am looking at Variometers, Variocouplers as
> well as a ferrite Loop to be driven by a C.Crane Twin coil mounted
> outside on an Antenna rotator.
>
> 73 de Jordanve7jjd
>
>

11750. lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-25 19:22:27 UTC
From: rinus nienhuis
Topic: 11750 Message: 11750

Dear List
My aim is to receive LW broadcast and NDB's in my living room
with preferably a antenna in that room
but when i try to do that , the whole band is full of "Noise""< i say it politely...>
what is the best antenna to counter this
All kinds of loops but it dazzle me

Regards
rinus

11751. Re: [loopantennas] lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-25 23:35:35 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11751

Hi

Try the Yahoo Group ultralightdx. Home of of the Ferrite Sleeve Magnetic Loops.
There are several You Tube Videos on these loops.

You are starting out at a disadvantage indoors, hopefully a wood building as opposed to a Concrete/Steel building.

For air Loops, the larger size/AREA the better. The bigger the Loop the more signal collected.

Consider an OUTDOORS, Remote, Varactor Tuned, Wide Band Low Noise Preamplifier

73 de Jordan ve7jjd

On Wed, Jan 25, 2017 at 11:22 AM, rinus nienhuis dridotcom3@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Dear List
>
> My aim is to receive LW broadcast and NDB's in my living room
>
> with preferably a antenna in that room
>
> but when i try to do that , the whole band is full of "Noise""< i say it
> politely...>
>
> what is the best antenna to counter this
>
> All kinds of loops but it dazzle me
>
>
> Regards
>
> rinus
>
>
>

--
73 Jordan VE7JJD

11752. Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-26 00:45:01 UTC
From: g8lco10@...
Topic: 11750 Message: 11752

Hi Rinus,

Homes on the grid are filled with RF noise sources- switching power supplies such as wall mount transformers, LCD displays, PC's and almost every domestic electrical appliance and the wiring. When you put any kind of antenna close to these devices you will hear them very well but not be able to hear weak external signals. A bit like trying to see the stars in the night sky from inside a brightly lit smoke filled room with dirty windows.

The complete answer is to move the antenna to an electrically quiet location i.e. outside a house. Noise fields drop off very rapidly with distance, moving 10 or 15 M/Yards away makes a vast difference. I would suggest that a portable radio tuned to the LF end of the MW makes a cheap survey tool, if you listen in possible antenna locations around noon you can soon find quieter locations. (mid-day listening = no distant signals so you can better hear the local noise!)

If you want to excel then you use the radio to locate and remove every noise source you can. You might find the odd laptop supply is very noisy or the odd aging low energy bulb. There are a range of noise reducing methods involving filtering which can be found in Ham radio publications if you want to push the limits.

Low noise antennas are a bit of a contradiction! you can have shielded loops that tend to reject electric fields and you can use directional antennas to avoid noise from some directions but there is not an antenna that is sensitive to weak distant signals yet will not hear strong local noise sources excepting in the world of advertising.

NDB's are a good test, with a loop OR an E-field active antenna 14M from my house I can always hear BIA or SA in Poland from near London UK . When conditions allow - 5/10W 160M transatlantic stations using WSPR. WSPR is a very interesting mode, it is a great test of receiving ability and you get real signal to noise numbers for your setup and those of everyone else via the database. That is very helpful as you can compare the results of changes in your set-up. WSPR does need a very stable (probably synthesised) receiver.

There is some very useful free software which is widely used for hunting very weak sub-audible signals, perhaps the easiest is Spectran. You send the received audio to a laptop or PC then you can see very low level signals on screen, read frequency and amplitude of the audio and see the nature of incoming signals, great for resolving slow Morse from NDB's or for learning about unknown signals.

Happy hunting.

Alan
G8LCO

11753. 2 channels, Linrad 4.11, phasing manual

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-26 17:11:58 UTC
From: sp2bpd@...
Topic: 11753 Message: 11753

For those interested in RX antennas phasing:

There is a new release of Linrad (4.11). Polarization graph has been extended with a Phasing window. Manual for Phasing window is available here:

LINRAD, TWO CHANNEL RECEPTION, http://www.sm5bsz.com/linuxdsp/run/phasing/linrad%20phasing%20window,%20v6%20open%20office.html

http://www.sm5bsz.com/linuxdsp/run/phasing/linrad%20phasing%20window,%20v6%20open%20office.html

LINRAD, TWO CHANNEL RECEPTION, http://www.sm5bsz.com/linuxdsp/run/phasing/linrad%20phasing%20window,%20v6%20open%20office.html Linrad, two channel reception, noise cancelling, antennas phasing.

View on www.sm5bsz.com http://www.sm5bsz.com/linuxdsp/run/phasing/linrad%20phasing%20window,%20v6%20open%20office.html
Preview by Yahoo

Software download from: Linrad home page. Download Linrad or update Linrad here. http://www.sm5bsz.com/linuxdsp/linrad.htm

Linrad home page. Download Linrad or update Linrad here. http://www.sm5bsz.com/linuxdsp/linrad.htm Videos Here are videos showing installation, calibration and usage of Linrad There are also a couple of vidos on general radio related things.

View on www.sm5bsz.com http://www.sm5bsz.com/linuxdsp/linrad.htm
Preview by Yahoo

Regards

Piotr, SP2BPD

11754. Re: [loopantennas] lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-25 20:36:57 UTC
From: Jim Wiley
Topic: 11750 Message: 11754

do you have a touch lamp or dimmer switch? those are a notorious noise source

From: "rinus nienhuis dridotcom3@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Wednesday, January 25, 2017 12:22 PM
Subject: [loopantennas] lw loop

  Dear List
My aim is to receive LW broadcast and NDB's in my living room
with preferably a antenna in that room
but when i try to do that , the whole band is full of "Noise""< i say it politely...>
what is the best antenna to counter this
All kinds of loops but it dazzle me

Regards
rinus

11755. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-26 12:10:52 UTC
From: rinus nienhuis
Topic: 11750 Message: 11755

Dear Jordan and Alan
Thanks a lot for the tips you gave me
i will try your suggestions
The last period i have read a lot about Loop antennas
Concerned the air loops i understand there are two kind of loops
the , for example, 4 foot box loop with spacings between the windings
and the other...
the spiral loop, the windings, also spaced, but are flat , as in a spiral
what will be the difference?
Regards
rinus
Op 26 januari 2017 om 1:45 schreef "g8lco10@... [loopantennas]" :

?
?
Hi Rinus,

Homes on the grid are filled with RF noise sources- switching power supplies?such as ?wall mount transformers, LCD displays, PC's and almost every domestic electrical appliance and the wiring. When you put any kind of antenna close to these devices you will hear them very well but not be able to hear weak external signals. A bit like trying to see the stars in the night sky?from inside a? brightly lit?smoke filled room with dirty windows.

The complete answer is to move the antenna to an electrically quiet location i.e. outside a house. Noise fields drop off very rapidly with distance, moving 10 or 15 M/Yards away makes a vast difference. I would suggest that a portable radio tuned to the LF end of the MW makes a cheap survey tool, if you listen in possible antenna locations around noon you can soon find quieter locations. (mid-day listening = no distant signals so you can better hear the local noise!)

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Happy hunting.

Alan
G8LCO?
??
?

?

?

11756. Re: [loopantennas] lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-26 21:58:08 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11756

Hi
The spiral coplanar will give a lower over all Area. This will more significant with Long Wave which calls for a longer length of wire than Medium Wave.

The Solenoid, Box Loop, retains large Area. It increases the the distributed capacitance which decreases the the resonant frequency; not a problem as the required variable capacitor will be adding a lot more capacitance.

http://www.angelfire.com/mb/amandx/loop.html This one is interesting in that it rotates in two planes.
http://makearadio.com/loops/ Dave's Homemade Loop Antennas examples of spiral and box loops.

Frame construction skills and visual esthetics of others using the Living Room come into play.

Wire selection is a toss up Litz is used on ferrites and occasionally on Air Loops. Consider heavy gauge solid copper that holds it shape when bent, making easier on a simpler frame.

Consider getting a Large cardboard box from the the local supermarket use as a frame for a prototype antenna both Box and Spiral on the same box. Also consider a Larger box like a Moving Company Wardrobe Box.

Cover the box with a cloth slip cover that fits the decor of the Living Room. Or even an outdoor Stealth Antenna on patio porch balcony or what have you.
73 de Jordan ve7jjd

On Wed, Jan 25, 2017 at 12:36 PM, Jim Wiley n0blu@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> do you have a touch lamp or dimmer switch? those are a notorious noise
> source
>
>
>
> ----------
> *From:* "rinus nienhuis dridotcom3@... [loopantennas]" <
> loopantennas@yahoogroups.com>
> *To:* loopantennas@yahoogroups.com
> *Sent:* Wednesday, January 25, 2017 12:22 PM
> *Subject:* [loopantennas] lw loop

>
>
> Dear List
> My aim is to receive LW broadcast and NDB's in my living room
> with preferably a antenna in that room
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> politely...>
> what is the best antenna to counter this
> All kinds of loops but it dazzle me
>
> Regards
> rinus
>
>
>
>

--
73 Jordan VE7JJD

11757. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 01:26:30 UTC
From: g8lco10@...
Topic: 11750 Message: 11757

Hi again,
The Spiral winding is simpler to make but the electrical balance is not so good as the type with parallel winding. Turns can be bundled together however the Q is decreased and the additional capacitance caused by close turns restricts the HF tuning range. You can use multi conductor cables by connecting the wires into one continuous winding but the self capacitance is very high and the Q is often quite low.

There are more kinds than TWO !! A very good option is to use a metal shield to contain the winding with an insulated gap. This was very widely used in Direction Finding, the screen helps force the capacitance of each side of the loop to ground to be similar and to reduce stray pick up. That gives clean nulls 180 degrees apart.

A variation is to use a single turn loop and a tuned transformer coupling to the receiver. That can be every bit as good as a multi-turn tuned loop but is far more convenient, by switching turns and/or using added inductance a single loop can cover a very wide frequency range. This single turn loop can also be well balanced to ground by grounding a centre tap on the transformer primary. Most DF receivers tightly couple the loop to a tuned transformer which can be switched for different bands, Aircraft DF receivers cover around 190-1750 KHz in three bands for example.

Another form is the single turn or two turn active loop where the loop is connected to a very low input impedance amplifier to produce a very wideband loop that is untuned, slightly less sensitive than the tuned loop but in any loop application below a few MHz you might be limited by the natural noise background.

There are other kinds of loop but perhaps a bit specialised.

Alan
G8LCO

11758. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 02:45:53 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11758

Hi
All/most of which you describe applies to higher frequency loops.
Rinus is interested in Long Wave/Ultra Long Wave. In these relatively
uncrowded Bands Q/Selectivity is not of paramount importance; IMHO.
73 de Jordan ve7jjd

An Interesting Loop Antenna

https://www.youtube.com/watch?v=jxm2LQAO5ic&t=40s
8' Loop Styrofoam Crystal Radio Part 5
josh8loop Uploaded Apr 8, 2013
This is some video and audio of my 8 foot diameter 660/46 Litz Contra Wound
Double Tuned Loop Crystal radio in action. The camera microphone wasn't as
sensitive as the RCA Big Cans, but this gives a general idea of what this
sounds like. Band conditions were really poor on this occasion. I hope to
do future videos of this thing in action with microphone output that
closely matches what I am actually hearing in the phones. Not bad for
completely passive reception!
Category Education License Standard YouTube License
https://www.youtube.com/watch?v=jxm2LQAO5ic&t=40s
---
https://www.youtube.com/watch?v=Nh_xZQYW4ns&t=53s#t=22.1183697
☐ 8' Loop Styrofoam Crystal Radio Part 4
josh8loop Published on Dec 9, 2012
Description of a couple aspects of a Loop Crystal Radio that uses Ben
Tongue Contra-Wound technique. Additionally has a description of a
Stator-Stator configuration with dual ganged variable capacitors.

Video of the finished product, and in operation can be seen here:

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☐ Category ☐ Education License Standard YouTube License
8' Loop Styrofoam Crystal Radio Part 5 josh8loop1,231 views
8' Loop Styrofoam Crystal Radio Part 3 josh8loop728 views
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---
https://www.youtube.com/watch?v=cuykcupxZrA&t=53s
8' Loop Styrofoam Crystal Radio Part 3
josh8loop
Published on Aug 19, 2012
This is the makings of an 8' Styrofoam 660/46 Litz double tuned loop
crystal radio. It features a round 8' aperture for signal capture. The main
loop will be using a six turn primary 8' in a Contra-Wound configuration to
allow easy band spread with two distinct inductance values from the main
loop winding. The main loop will also use a 4-gang variable capacitor in a

wiperless configuration which if my prior loop experience pans out will
allow the loop to remain electrically "balanced". I have experienced this
wiperless-induced balance before in a previous variant of a large loop, and
it has exceptional Q enhancing abilities among other attributes. I fully
expect that this loop with the quality materials and construction methods
employed will resonate and re-radiate RF with a bandwidth of around 30-40
KHz which should drastically enhance inductively coupled secondary
selectivity. The secondary or "detector" portion will use a ferrite
assisted air coil and a high quality silver/ceramic single gang variable
capacitor and an Advanced Linear Devices Zero Bias FET and a separate tank
source winding to demodulate the audio from the RF. The styrofoam used to
make the ring was purchased from an architectural styrofoam manufacturing
company that uses a "Hot Wire" type CNC machine to create various styrofoam
profiles. Future videos will show additional construction techniques and
details of the "detector" portion among other aspects.

Further information on the loop can be found here:

http://theradioboard.com/rb/viewtopic...

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Category Education License Standard YouTube
https://www.youtube.com/watch?v=cuykcupxZrA&t=53s

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https://www.youtube.com/watch?v=13D3gFWbswc&t=4s
8' Loop Styrofoam Crystal Radio Part 1
josh8loop
Published on Aug 12, 2012
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loop will be using a six turn primary 8' in a Contra-Wound configuration to
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http://theradioboard.com/rb
https://www.youtube.com/watch?v=DQqcCgNmGTw&t=24s

On Thu, Jan 26, 2017 at 5:26 PM, g8lco10@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

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> Hi again,
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>
> There are other kinds of loop but perhaps a bit specialised.
>
> Alan
> G8LCO
>
>
>
>

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73 Jordan VE7JJD

11759. Re: [loopantennas] Loop Antennas with Antenna Jacks

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 04:29:44 UTC
From: kevin asato
Topic: 11748 Message: 11759

Terk Advantage loop antenna is 8 turns of wire on a 12-inch diameter form. The usual AM tuning capacitor is soldered in parallel with this coil. The 1/8"/3.5mm jack is connected to a single turn loop in parallel with the 8-turn loop. The single turn loop can be connected to an antenna and ground connection or use to inductively couple the loop to the BCB receiver. When used with a multi-inductor xtal radio, the Terk can also be used as trap filter for undesired/nearby transmitters with one connection from the 1/8" plug towards the antenna and the other to the antenna input of the xtal radio.

73,
kevin
kc6pob

HiI am looking for
the Schematics of the Select A Tenna with Antenna Jack, as
well as the Terk and Tecsun Loop
Antennas.I am trying to figure out how
best to use them with multi Inductor Crystal Radio ensemble.
I am looking at Variometers, Variocouplers as well as a
ferrite Loop to be driven by a C.Crane Twin coil mounted
outside on an Antenna rotator. 73 de
Jordanve7jjd

11760. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 10:02:07 UTC
From: rinus nienhuis
Topic: 11750 Message: 11760

Hi Alan
Very interesting stuff you wrote
Often i red in articles: the Q is ...or the resonant frequency is ...
is there equipment to measure these two?
Although very interesting stuff and suggestions i see myself delivered to a unbelieable amazon forest
of antenna possibilities
Just wanna receeive ndb's and lw stations in my living room
what antenna to start with
i will start with switiching off all kinds of equipment...
Regards
rinus
Op 27 januari 2017 om 2:26 schreef "g8lco10@... [loopantennas]" :

?
?
Hi? again,
The Spiral winding is simpler to make but the electrical balance is not so good as the type with parallel winding. Turns can be bundled together however the Q is decreased and the additional capacitance caused by close turns restricts the HF tuning range. You can use multi conductor cables by connecting the wires into one continuous winding but the self capacitance is very high and the Q is often quite low.

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There are other kinds of loop but perhaps a bit specialised.

Alan
G8LCO

?

?

?

11761. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 10:04:44 UTC
From: rinus nienhuis
Topic: 11750 Message: 11761

Hi Jordan
i will check your video's
many thanks
rinus

Op 27 januari 2017 om 3:45 schreef "Jordan Dobrikin jjdobrikin@... [loopantennas]"
?
?
Hi
All/most of which you describe applies to higher frequency loops.
Rinus is interested in Long Wave/Ultra Long Wave. In these relatively uncrowded Bands
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Category ?Education ? License ?Standard YouTube License ?
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8' Loop Styrofoam Crystal Radio Part 5 josh8loop1,231 views ??
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https://www.youtube.com/watch?v=cuykcupxZrA&t=53s ?
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josh8loop ?
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Further information on the loop can be found here:

http://theradioboard.com/rb/viewtopic...?

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https://www.youtube.com/watch?v=DQqcCgNmGTw&t=24s

On Thu, Jan 26, 2017 at 5:26 PM, g8lco10@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
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Alan
G8LCO

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?;

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73 Jordan VE7JJD
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60;

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11762. Re: [loopantennas] lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 10:03:25 UTC
From: rinus nienhuis
Topic: 11750 Message: 11762

i have a dimmer ...and will switch it off...
thanks !
rinus
Op 25 januari 2017 om 21:36 schreef "Jim Wiley n0blu@... [loopantennas]" :

?
?
do you have a touch lamp or dimmer switch?? those are a notorious noise source

From: "rinus nienhuis dridotcom3@... [loopantennas]"
To: loopantennas@yahoogroups.com
Sent: Wednesday, January 25, 2017 12:22 PM
Subject: [loopantennas] lw loop

?
60;
Dear List
My aim is to receive LW broadcast and NDB's in my living room
with preferably a antenna in that room
but when i try to do that , the whole band is full of "Noise""< i say it politely...>
what is the best antenna to counter this
All kinds of loops but it dazzle me

Regards
rinus
?

?

?

?

11763. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 18:10:37 UTC
From: g8lco10@...
Topic: 11750 Message: 11763

Hi Rinus,
Tuned circuit Q is sometimes called the "Quality Factor", it's how sharply the circuit resonates. So if you had a loop resonant at 1MHz (1000KHz) and a Q of 50 it will have a "bandwidth" of f/Q = 1000/50=20 KHz between the tuning points where the output is at half the peak power (-3dB).

Q has a multiplying effect on received signals, a loop with a working Q of 200 will deliver four times (+12dB) more signal than a working Q of 50. This gain is noiseless unlike an active amplifier. A Q of 100-200 is not difficult to attain in a home made loop. If you had a 1m square loop of around 7 turns with a 500pF air spaced tuning capacitor with a 1 turn coupling loop to the receiver you should tune MW OK. More turns for LW, if the turns are around 5mm or 1/4" apart then the Q will be good, bundling the turns will greatly increase their capacitance and reduce the HF end of the tuning range as well as reducing the sensitivity.

There are Q meters available but they are a bit rare these days. A SDR receiver and a signal generator can be used, you find the two frequencies where the loop output is 3dB down, subtract to get the bandwidth then divide the mid frequency by the bandwidth to reveal the Q number. A very rough test is how sharp the tuning is- if you wished the tuning knob was a lot bigger or you had a reduction gear because the tuning is sharp then you have a highish Q!!

I would seriously suggest that you make your gear portable so you can experience the vast difference getting away from household wiring and appliances makes, there is a day and night difference!

As said a little transistor MW radio is a useful tool for detecting noise from wiring , bulbs, wall warts and many other appliances, you can quickly find the main noise generators. If you have battery powered gear then it might be worth just switching off all of the power for a few moments to kill all of your own local noise and hear what happens.

Good DX,

Alan
G8LCO

11764. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 20:30:44 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11764

HI
Good explanation and advice.

Most all radios will benefit with a good RF Ground Spike in the earth best, Clamp to metal Cold Water plumbing, or connection to House wiring Neutral/Ground.

Battery operation avoids noise coming through the AC wiring, noisy Wall Warts. You want Low Self Discharge batteries Rechargeable Alkaline or NIMH ENELOOP

Some noise reducing Ferrites on noisy appliances won't hurt. TV power cord, Computer & and Monitor cords, etc..

item sold by kk4hxj
<http://www.ebay.com/usr/kk4hxj?_trksid=p2057872.m2749.l2754>
[image: Shortwave/Communication Receiver Ground Wire Kit - Listening &/or Service Ground]
Shortwave/Communication Receiver Ground Wire Kit - Listening &/or Service Ground
(331916754797)

1 item sold by winneresales
<http://www.ebay.com/usr/winneresales?_trksid=p2057872.m2749.l2754>

[image: 24 Rechargeable AA/AAA Alkaline Batteries and Charger]
24 Rechargeable AA/AAA Alkaline Batteries and Charger
(111232047247)

Oct 15, 2016
ORDER TOTAL
US $7.11
+ US $0.77
shipping
Order NEW 10x Black Plastic Clip On Noise Suppressor 5mm Cable Ferrite Core Filters View similar items - ORDER DATE Oct 15, 2016
<http://www.ebay.com/sch/sis.html?_nkw=NEW+10x+Black+Plastic+Clip+On+Noise+Suppressor+5mm+Cable+Ferrite+Core+Filters&_id=291644619679&&_trksid=p2057872.m2749.l2658>View seller's other items - ORDER DATE Oct 15, 2016
<http://www.ebay.com/sch/mhestore2009/m.html?ssPageName=&_trksid=p2057872.m2749.l2654>
More actions - ORDER DATE Oct 15, 2016
<http://www.ebay.com/myb/PurchaseHistory#>
1 item sold by mhestore2009
<http://www.ebay.com/usr/mhestore2009?_trksid=p2057872.m2749.l2754>
[image: NEW 10x Black Plastic Clip On Noise Suppressor 5mm Cable Ferrite Core Filters]
NEW 10x Black Plastic Clip On Noise Suppressor 5mm Cable Ferrite Core

Filters
(291644619679)

Quantity: 3
ITEM PRICE:
US $7.11
ITEM PRICE:
US $22.99

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> where the loop output is 3dB down, subtract to get the bandwidth then
> divide the mid frequency by the bandwidth to reveal the Q number. A very
> rough test is how sharp the tuning is- if you wished the tuning knob was a
> lot bigger or you had a reduction gear because the tuning is sharp then you
> have a highish Q!!
>
> I would seriously suggest that you make your gear portable so you
> can experience the vast difference getting away from household wiring and
> appliances makes, there is a day and night difference!
>
> As said a little transistor MW radio is a useful tool for detecting noise
> from wiring , bulbs, wall warts and many other appliances, you can quickly
> find the main noise generators. If you have battery powered gear then it
> might be worth just switching off all of the power for a few moments to
> kill all of your own local noise and hear what happens.
>
> Good DX,
>
> Alan

> G8LCO
>
>
>

--
73 Jordan VE7JJD

11765. Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 20:58:45 UTC
From: kthkit@...
Topic: 11750 Message: 11765

Dear Rinus,
Domestic noise is increasing indoors these days and if you want receiving indoors it will pick up the electric and magnetic noise component from switch regulator and alike.
If you want to suppress the domestic noise the best way is probably installing the ferrite loop above the roof noise level away from the source.
For indoor installing a ferrite loop antenne you can screen the loop for the electric field with a thin static wire screen not making short-circuit the RX field and so reduce the parasitic capacity and maintain the Q factor of the loop windings.
The noise from the electric field is reduced that way. Bud there is also noise in the magnetic component that may be reduced by turning the loop to de magnetic NUL from the source.

For an large air loop the windings should be screened also and that can be done with a RG214 coax loop and use the outer screen. On top it has a small open cap and not shorted the fields. The inner will be the loop itself and taken out from a small center gap below in the screen. The screen should below connect to ground.
A good description how to screen a ferrite loop can be found on this site from PA2OHH http://www.qsl.net/pa2ohh/07fer.htm http://www.qsl.net/pa2ohh/07fer.htm handling this problem.
I have a professional Bendix ferrite loop antenne from an air craft automatic LW beacon direction finder with use also PA2OHH his thin wire screening technique.

73” Joris’PE1KTH

11766. noise from 60 to approx. 140 hz

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 21:18:47 UTC
From: J Ferrow
Topic: 11766 Message: 11766

Hi, Not a specific loop antenna question, but I have this pulsating "snaking" noise on my perseus spectrum from about 10 khz to approx.190 khz. It's worse in some areas such as its really bad around 180 to 190 khz, the area of the ham experimental beacon bands. I used a battery to power my loop and whip amplifier thinking it was maybe coming from the amplifiers wal-wart, but its still there. I isolated my perseus 5 volt wal wart with an isolation transformer, but that doesn't help. i'm running my computer off it's battery and even moved my whip antenna on to the fairway of the golf couse i live on, pretty far away from any possible emi and its still there. Is this just naturally occuring noise? is there any way to smooth or filter it out as I would like to listen for beacons on the experimental band. thanks
John in FLA

11767. Re: [loopantennas] lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 21:36:49 UTC
From: Maxwell Mclellan
Topic: 11750 Message: 11767

Greetings Rinus. To search out noise sources use a small transistor radio as a "sniffer". Take the receiver, extend the telescopic antenna about 200mm, tune off a station so that you receive noise. Use the setup as a "wand", like Harry Potter, moving it around electrical items. You do not need to turn things off. you will soon sniff out noise sources. Regards Max vk2tti.

Sent from my iPad

> On 27 Jan 2017, at 9:03 PM, rinus nienhuis dridotcom3@ziggo.nl [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> i have a dimmer ...and will switch it off...
>
> thanks !
>
> rinus
>
>> Op 25 januari 2017 om 21:36 schreef "Jim Wiley n0blu@... [loopantennas]" <loopantennas@yahoogroups.com>:
>>
>>
>>
>>
>> do you have a touch lamp or dimmer switch? those are a notorious noise source
>>
>>
>>
>> From: "rinus nienhuis dridotcom3@... [loopantennas]" <loopantennas@yahoogroups.com>
>> To: loopantennas@yahoogroups.com
>> Sent: Wednesday, January 25, 2017 12:22 PM
>> Subject: [loopantennas] lw loop
>>
>>
>>
>> Dear List
>> My aim is to receive LW broadcast and NDB's in my living room
>> with preferably a antenna in that room
>> but when i try to do that , the whole band is full of "Noise""< i say it politely...>
>> what is the best antenna to counter this
>> All kinds of loops but it dazzle me
>>
>> Regards
>> rinus
>
>

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>
>
>

11768. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 19:36:20 UTC
From: rinus nienhuis
Topic: 11750 Message: 11768

Hi Alan
Thanks a lot again , that you take the effort to make things clear for me
I really appreciate it.
And i understand it, what you write.
But it brings up new questions...
Has the used wire also influence on the Q?

and is there a relationship or ratio between the size of the loop, how much windings, spacing, wire's used, capacitance
and the frequency area where the loop is designed for?
is there somewhere a diagram , where one can read :< for example>...
i want to make a loop for VLF
which size do i need, how many turns, which wire , how much capacitance?
is there a ratio?< is that the right word?>
Regards
rinus
and i will provoke complete power shutdown,,,locally....and see what happens to the signals..
Op 27 januari 2017 om 19:10 schreef "g8lco10@yahoo.co.uk [loopantennas]" :

?
?
Hi Rinus,
Tuned circuit Q is sometimes called the "Quality Factor", it's how sharply the circuit resonates. So if you had a loop resonant at 1MHz (1000KHz) and a Q of 50 it will have a ";bandwidth" of? f/Q = 1000/50=20 KHz?between the tuning points where the output is at half the peak power (-3dB).

Q has a multiplying effect on received signals, a loop with a? working Q of 200 will deliver four times (+12dB) more signal than a working Q of 50. This gain is noiseless unlike an active amplifier. A Q of 100-200 is not difficult to attain in a home made loop. If you had a 1m square loop of around 7 turns with a 500pF air spaced tuning capacitor with a 1 turn coupling loop to the receiver you should tune MW OK. More turns for LW, if the turns are around 5mm or 1/4" apart then the Q will be good, bundling the turns will greatly increase their capacitance and reduce the HF end of the tuning range as well as reducing the sensitivity.

There are Q meters available but they are a bit rare these days. A SDR receiver and a signal generator can be used, you find the two frequencies where the loop output is 3dB down, subtract to get the bandwidth then divide the mid frequency by the bandwidth?to reveal the Q?number. A very rough test is how sharp the tuning is- if you wished the tuning knob was a lot bigger or you had a reduction gear because the tuning is sharp then you have a highish Q!!??

I would seriously suggest that you make your?gear portable so you can?experience the vast difference getting away from household wiring and appliances makes, there is a day and

night difference!

As said a little transistor MW radio is a useful tool for detecting noise from wiring , bulbs, wall warts and many other appliances, you can quickly find the main noise generators. If you have battery powered gear then it might be worth just switching off all of the power for a few moments?to kill all of your own local noise and hear what happens.

Good DX,

Alan
G8LCO
?

?

?

11769. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 22:23:43 UTC
From: Dexter
Topic: 11750 Message: 11769

I have been using a 3-ft square tuned loop for 150 to 440 kHz with great success for many years. This is a "pancake" loop, wound in a single plane. The coil consists of 80 turns of 22 AWG stranded wire. It is woven tennis-racket style on a wooden cross with holes drilled every 1/4 inch. The coil and tuning capacitor rotate 360 degrees laterally and 90 degrees vertically in order to produce excellent nulls in any direction.

There are a few basic points you need to consider. The signal is picked up by the coil. The capacitor is just there to provide resonance to the circuit. The values of inductance and capacitance at a given frequency are inversely proportional. Therefore, the tuned circuit should have the highest L/C ratio possible in order to optimize pickup.

In order to minimize capacitance, some effort should be made to lower the distributed capacitance of the coil. The distributed capacitance is partially a function of the shape of the coil. Given the same inductance, a pancake coil (vs. a solenoid shape) will have the least distributed capacitance.

You can feed the coil/capacitor with a characteristic low impedance in series with the transmission line. This however will place the transmission line and receiver in series with the tuned circuit at resonance and effectively lower the Q. My loop is fed from a pickup coil (3 turns, 8-inch diameter) mounted in the center of the primary coil. The primary coil and pickup coil thus form a transformer. This allows the main coil and capacitor forming the tuned circuit to "freewheel" in space under minimal load, and preserves the high Q. In fact, Q is high enough that the circuit must be repeaked every kHz.

Bob C.

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

11770. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-27 22:58:52 UTC
From: Phillips
Topic: 11750 Message: 11770

Hi Rinus,

I thought that I might add my two cents' worth.

I have experimented with air loops of varying size and configuration both inside and outside as well as ferrite rod antennas of varying configurations such as 580mM single rod, 200mM single rod and 3.5" FSL's.

For a first-time DX'er I would recommend a 200mM ferrite rod antenna using cheap Litz wire. I say this because it is relatively easy and cheap to build, convenient to use and provides good performance for its size. You can add shielding, rearrange the windings or use higher performance litz, easily at a later time. As your experience and expertise blossom, you may consider making additional antennas but the 200 ferrite will provide a good start.

There is a wealth of information on ferrite rod antennas on the 'net - search "ferrite rod antenna construction". Unless you can use identical parts in constructing an existing loop, there are so many variables that some experimentation is inevitable. If you begin with the mindset that "I am going to have to do some experimentation", you will be better equipped to get the best out of your components. One trick that I use is to wind more turns than I think I will need and then take turns off until it tunes as I want (removing turns is a lot easier than trying to add them).

As for power outages - they are a blessing. In my part of suburbia, the man made noise is horrific. When the power goes out (not often enough - curse the efficient distribution company) a whole new world of RX opens up. But then getting away from the noise is a good excuse for trips to the wilderness. Another reason for a 200mM antenna - it is highly portable - even taking it to the park can sometimes get rid of a lot of man made noise. Carrying a 4 foot square air loop to the park is great for aerobic fitness but not for convenience.

Looks like my two cents turned into two dollars. No matter, whatever path you finish up taking, I hope you get a lot of pleasure and satisfaction,

Ray

COLEMAK
The keyboard layout for rational thinkers
Standard with Mac, Linux & Android. Free for Windows
Training at http://thetypingcat.com/course/colemak
<http://www.michaelcapewell.com/projects/keyboard/layout_capewell-dvorak.htm>

From: loopantennas@yahoogroups.com <loopantennas@yahoogroups.com> on behalf of rinus nienhuis dridotcom3@ziggo.nl [loopantennas] <loopantennas@yahoogroups.com>
Sent: Saturday, 28 January 2017 6:06 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: lw loop

Hi Alan

Thanks a lot again , that you take the effort to make things clear for me
I really appreciate it.
And i understand it, what you write.
But it brings up new questions...

Has the used wire also influence on the Q?
<maybe that explaines why litze wire is often used...>
and is there a relationship or ratio between the size of the loop, how much windings, spacing, wire's used, capacitance
and the frequency area where the loop is designed for?
is there somewhere a diagram , where one can read :< for example>...
i want to make a loop for VLF
which size do i need, how many turns, which wire , how much capacitance?
is there a ratio?< is that the right word?>
Regards
rinus

and i will provoke complete power shutdown,,,locally....and see what happens to the signals..

Op 27 januari 2017 om 19:10 schreef "g8lco10@... [loopantennas]" <loopantennas@yahoogroups.com>:

Hi Rinus,
Tuned circuit Q is sometimes called the "Quality Factor", it's how sharply the circuit resonates. So if you had a loop resonant at 1MHz (1000KHz) and a Q of 50 it will have a "bandwidth" of f/Q = 1000/50=20 KHz between the tuning points where the output is at half the peak power (-3dB).

Q has a multiplying effect on received signals, a loop with a working Q of 200 will deliver four times (+12dB) more signal than a working Q of 50. This gain is noiseless unlike an active amplifier. A Q of 100-200 is not difficult to attain in a home made loop. If you had a 1m square loop of around 7 turns with a 500pF air spaced tuning capacitor with a 1 turn coupling loop to the receiver you should tune MW OK. More turns for LW, if the turns are around 5mm or 1/4" apart then the Q will be good, bundling the turns will greatly increase their capacitance and reduce the HF end of the tuning range as well as reducing the sensitivity.

There are Q meters available but they are a bit rare these days. A SDR receiver and a signal generator can be used, you find the two frequencies where the loop output is 3dB down, subtract to get the bandwidth then divide the mid frequency by the bandwidth to reveal the Q number. A very rough test is how sharp the tuning is- if you wished the tuning knob was a lot bigger or you had a reduction gear because the tuning is sharp then you have a highish Q!!

I would seriously suggest that you make your gear portable so you can experience the vast difference getting away from household wiring and appliances makes, there is a day and night difference!

As said a little transistor MW radio is a useful tool for detecting noise from wiring , bulbs, wall warts and many other appliances, you can quickly find the main noise

generators. If you have battery powered gear then it might be worth just switching off all of the power for a few moments to kill all of your own local noise and hear what happens.

Good DX,

Alan
G8LCO

11771. Re: noise from 60 to approx. 140 hz

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 01:51:45 UTC
From: g8lco10@...
Topic: 11766 Message: 11771

Hi John,

Why not DF the noise? Turn the loop until the noise is minimal then check that the other null is exactly half a turn around. The signal is then exactly broadside (90 degrees) to the turns. If you can't find a null it's the gear! Several bearings from different locations should reveal the source but best done during the day when no skywaves around..

Not sure what the noise sounds like, if it is a click the could be an electric fence, buzz could be a power line fault - often weather dependant.

73,

Alan
G8LCO.

11772. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 01:34:25 UTC
From: g8lco10@...
Topic: 11750 Message: 11772

Hi Rinus

Litz wire provides higher Q over a limited frequency range around MW frequencies - at LF and HF the improvement is often not worth the much higher cost for a hobby user. You also have to be sure that you connect to every strand of the enameled litz strands at both ends otherwise the enhancement in Q can be lost. Regular 16/0.2 PVC insulated " hook up" wire works well for nearly all air cored loop use certainly it is good enough to use to get you going and is much easier to obtain and use.

I outlined a MW 7 turn loop in the last post. Putting on twice the number of turns will increase the inductance four times (L proportional to turns squared) so that if a 7 turn loop tunes down to 500KHz then a 14 turn loop will tune down to 250KHz approximately with the same tuning capacitor. Large loops need wire! A 7 turn 1m sided loop needs 1m x 4 sides x 7 turns = 28m of wire. Air spaced tuning capacitors from an old AM MW radio have advantages- higher Q and you can see from the meshing of the vanes how much C you have.

However people worry about loop size- it is not as important as WHERE you put it, what you hear is limited to the amount of noise against the signals you want to hear. Beyond a set size you don't improve the signal to noise- only make both bigger. Giant loops only make sense in very quiet country locations with NO overhead lines for miles. Even there you get to the point where atmospheric noise becomes the limit. A 1m /1 yard sided loop of modest Q should reach the noise floor in many locations from 100KHz to 1600 KHz.

Throw something together this weekend from whatever you have around and get listening!!! It does not have to be perfect immediately. You have not said what kind of receiver you have. These days I would strongly suggest a SDR & laptop combo, you get so much more information from the screen and can see signals you can't hear. They are very good for NDB's at extreme range. But any radio with an audio out can be used with Spectran on a laptop to give exceptional sensitivity and a waterfall display ideal for weak signal work.

Get building & listening!! you can make a simple loop with a wooden cross then use cable ties or string to hold the windings to the wood in a spiral fashion- quick and effective. Then you could use cross arms to allow the turns to be parallel as a follow up. (If you can- best to do both and compare how they work by swapping one to the other much more meaningful than trying to remember how it worked- always misleading).

Alan
G8LCO

11773. Re: [loopantennas] Re: noise from 60 to approx. 140 hz

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 03:45:23 UTC
From: J Ferrow
Topic: 11766 Message: 11773

Hi Alan, Thanks for the suggestion. I have noticed that getting the loop up in the air eliminates some of the noise. I'll try and rotate it tomorrow and get it up in the air higher and see where the noise source is coming from and if the extra height helps more also. For this particular loop I'm using the wellbrook ala-100 LN amplifier. Currently I have about a 20 meter circumference loop on a PVC "cross". The plan is to make two loop "crosses" at right angles and use a relay to switch between the two to make it more directional. i would like to make the circumference bigger, but unfortunately i have neighbors on either side of me so if i make it too big i'll pick up more and more noise. perhaps if I make the cross out of large wood dowels people use to hang curtains and such i can get some more circumference due to the better rigidity of the wood . I know some dx'ers are using 100 ft + circumferences and more. for me smaller is manageable and will allow me to move the loop and get it up higher as to null the noise as you suggested. Thank-you again.
john

On Friday, January 27, 2017 9:33 PM, "g8lco10@... [loopantennas]" <loopantennas@yahoogroups.com> wrote:

  Hi John,
Why not DF the noise? Turn the loop until the noise is minimal then check that the other null is exactly half a turn around. The signal is then exactly broadside (90 degrees) to the turns. If you can't find a null it's the gear! Several bearings from different locations should reveal the source but best done during the day when no skywaves around.. Not sure what the noise sounds like, if it is a click the could be an electric fence, buzz could be a power line fault - often weather dependant.
73,
AlanG8LCO.

11774. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 04:50:06 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11774

Hi
The "wire" is Key in all small magnetic loops.

The name of the game is maximum surface area AC/RF travels on the outer portions/surface of a conductor, even at 60 cycles where high voltage transmission lines are a hollow core.

That is why you see Copper Pipe and other metallic strips, bar stock and ribbon on transmitter loops as well as commercial receive loops like Wellbrook & others. These loops depend on low noisw differential amplifiers to give their wide frequency range

Litz wire the ultimate multi strand maximum surface area is good up to the top end of the MW Band. However its a bit pricey especially in VLF, & LF where you need a lot of wire length. It's a bit flimsy for larger open air loops and obviously limited to indoor use. Litz comes in several grades with the lowest cheapest grade most likely better than stranded wire

Stranded wire is better than solid wire.

You really don't need a formula as the frame will determine how much wire you can use, IMHO.

For VLF/LF a spiral loop is mechanically impractical, again IMHO.

For a solenoid loop you probably will not be able to wind a single layer so wire spacing becomes moot, again IMHO.

73 de Jordan ve7jjd

On Fri, Jan 27, 2017 at 5:34 PM, g8lco10@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Hi Rinus
>
> Litz wire provides higher Q over a limited frequency range around MW
> frequencies - at LF and HF the improvement is often not worth the much
> higher cost for a hobby user. You also have to be sure that you connect to
> every strand of the enameled litz strands at both ends otherwise the
> enhancement in Q can be lost. Regular 16/0.2 PVC insulated " hook up" wire
> works well for nearly all air cored loop use certainly it is good enough
> to use to get you going and is much easier to obtain and use.
>
> I outlined a MW 7 turn loop in the last post. Putting on twice the number
> of turns will increase the inductance four times (L proportional to turns

> squared) so that if a 7 turn loop tunes down to 500KHz then a 14 turn loop
> will tune down to 250KHz approximately with the same tuning capacitor.
> Large loops need wire! A 7 turn 1m sided loop needs 1m x 4 sides x 7 turns
> = 28m of wire. Air spaced tuning capacitors from an old AM MW radio have
> advantages- higher Q and you can see from the meshing of the vanes how much
> C you have.
>
> However people worry about loop size- it is not as important as WHERE you
> put it, what you hear is limited to the amount of noise against the
> signals you want to hear. Beyond a set size you don't improve the signal to
> noise- only make both bigger. Giant loops only make sense in very quiet
> country locations with NO overhead lines for miles. Even there you get to
> the point where atmospheric noise becomes the limit. A 1m /1 yard sided
> loop of modest Q should reach the noise floor in many locations from
> 100KHz to 1600 KHz.
>
> Throw something together this weekend from whatever you have around and
> get listening!!! It does not have to be perfect immediately. You have not
> said what kind of receiver you have. These days I would strongly suggest a
> SDR & laptop combo, you get so much more information from the screen and
> can see signals you can't hear. They are very good for NDB's at extreme
> range. But any radio with an audio out can be used with Spectran on a
> laptop to give exceptional sensitivity and a waterfall display ideal for
> weak signal work.
>
> Get building & listening!! you can make a simple loop with a wooden cross
> then use cable ties or string to hold the windings to the wood in a spiral
> fashion- quick and effective. Then you could use cross arms to allow the
> turns to be parallel as a follow up. (If you can- best to do both and
> compare how they work by swapping one to the other much more meaningful
> than trying to remember how it worked- always misleading).
>
>
>
> Alan
> G8LCO
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73 Jordan VE7JJD

11775. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 05:24:11 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11775

Hi

http://www.crystalradio.net/professorcoyle/professorcoylecyl.shtml

73 de Jordan ve7jjd

On Fri, Jan 27, 2017 at 8:50 PM, Jordan Dobrikin <jjdobrikin@...>
wrote:

> Hi
> The "wire" is Key in all small magnetic loops.
>
> The name of the game is maximum surface area AC/RF travels on the outer
> portions/surface of a conductor, even at 60 cycles where high voltage
> transmission lines are a hollow core.
>
> That is why you see Copper Pipe and other metallic strips, bar stock and
> ribbon on transmitter loops as well as commercial receive loops like
> Wellbrook & others. These loops depend on low noisw differential amplifiers
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>
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> You really don't need a formula as the frame will determine how much wire
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> For VLF/LF a spiral loop is mechanically impractical, again IMHO.
>
> For a solenoid loop you probably will not be able to wind a single layer
> so wire spacing becomes moot, again IMHO.
>
> 73 de Jordan ve7jjd
>
> On Fri, Jan 27, 2017 at 5:34 PM, g8lco10@... [loopantennas] <
> loopantennas@yahoogroups.com> wrote:
>
>>
>>
>> Hi Rinus
>>

>> Litz wire provides higher Q over a limited frequency range around MW
>> frequencies - at LF and HF the improvement is often not worth the much
>> higher cost for a hobby user. You also have to be sure that you connect to
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>> works well for nearly all air cored loop use certainly it is good enough
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>> C you have.
>>
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>> put it, what you hear is limited to the amount of noise against the
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>> noise- only make both bigger. Giant loops only make sense in very quiet
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>> loop of modest Q should reach the noise floor in many locations from
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>> SDR & laptop combo, you get so much more information from the screen and
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>> laptop to give exceptional sensitivity and a waterfall display ideal for
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>> compare how they work by swapping one to the other much more meaningful
>> than trying to remember how it worked- always misleading).
>>
>>
>>
>> Alan
>> G8LCO
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> --
> 73 Jordan VE7JJD
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73 Jordan VE7JJD
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11776. Re: noise from 60 to approx. 140 hz

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 13:24:04 UTC
From: dj_philonline@...
Topic: 11766 Message: 11776

Hi John, any chance it could be solar panels with a nasty cheaply built inverter, have seen this a few times lately and a rotated loop found the inverter placement.
73
Phil
2e0tmi

11777. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 16:57:29 UTC
From: rinus nienhuis
Topic: 11750 Message: 11777

Dear Alan
Again thanks and again, you, and other on this list ,?make things very clear for me
I have the following equipment:
several portables as sony 7600 GR and Sangean and Degen 1103
but also Icom 8600 and also ELAD FDM -S2 SDR
i think you will be satisfied ...hihi, also i have60; a FT-817 yeasu

About building soon...i have the following wires in my junkbox...
PVC 24/0.2 mm wire,,,approx 80 meters

660/# 46 m?? 0.04 mm litz wire?60;? approx.60 feet
and
stranded? speaker wire 0.75 mm2? with transparent/clear insulation? approx 100 meters

also several , up 700 pF, capacitors from old radios

also i have a ala 1530 loop but not useable indoors...

this week i will start with checking the noise sources
Regards
rinus

Op 28 januari 2017 om 2:34 schreef "g8lco10@yahoo.co.uk [loopantennas]" :

?
?
Hi Rinus

Litz wire provides higher Q over? a limited frequency range? around MW frequencies - at LF and HF the improvement is often?not worth the much higher cost for a hobby user. You also have to be sure that you connect to every strand of the enameled litz strands? at both ends otherwise the enhancement in Q can be lost. Regular 16/0.2 PVC insulated " hook up" wire works well for nearly all? air cored loop use certainly it is good enough to use to get you going and is much easier to obtain and use.

I outlined a MW 7 turn loop in the last post. Putting on twice the number of turns will increase the inductance four times (L proportional to turns squared) so that? if a 7 turn loop tunes down to 500KHz then a 14 turn loop will tune down to 250KHz approximately with the same tuning capacitor. Large loops need wire! A 7 turn 1m sided loop needs 1m x 4 sides x 7 turns = 28m of wire. Air spaced tuning capacitors from an old AM?; MW radio have advantages- higher Q and you can see from the meshing of the vanes how much C you have.

However people worry about loop size- it is not as important as WHERE you put it, what you hear is limited to the amount of noise?against ?the signals you want to hear. Beyond a set size you don't improve the signal to noise- only make both bigger. Giant loops only make sense in very quiet country locations with NO overhead lines for miles. Even there you get to the point where atmospheric noise? becomes the limit. A 1m /1 yard sided loop?0;of

modest Q should?reach the noise floor in many locations from 100KHz to? 1600 KHz.

Throw something together this weekend from whatever you have around and get listening!!! It does not have to be perfect immediately. You have not said what kind of receiver you have. These days I would strongly?suggest ?a SDR & laptop combo, you get so much more information from the screen and can see signals you can't hear. They are very good for NDB's at extreme range.? But any radio with an audio out can be used with Spectran on a laptop to give exceptional sensitivity and a waterfall display ideal for weak signal work.

Get building & listening!! you can make a simple loop with a wooden cross then use cable ties or string?to hold the windings to the wood in a spiral fashion- quick and effective.? Then you could use cross arms? to allow the turns to be parallel as a follow up. (If you can- best to do both and compare how they work by swapping one to the other much more meaningful than trying to remember how it worked- always misleading).

Alan
G8LCO

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11778. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 17:14:02 UTC
From: rinus nienhuis
Topic: 11750 Message: 11778

Dear Ray
i am very happy with your answer , Much more worth, than money, for me !
If you write: a 200 mM single rod, i think you mean a rod of 20 cm...?
and is your suggestion for MW, or LW or both?
do i also need a capacitor of 700 pF with it?
and do i need also a amplifier with it\
how many turns of wire do i need approx

i am certainly willing to make it and experiment with it , but the same as with loop antenna's...
the problem i encounter is the very large amount of information
i am flooded through it..
that's the reason i started asking you on this list,all this questions

Again thanks
Regards
rinus

Op 27 januari 2017 om 23:58 schreef "Phillips phillicom@... [loopantennas]" :

?
?
Hi Rinus,

I thought that I might add my two cents' worth.

I have experimented with air loops of varying size and configuration both inside and outside as well as ferrite rod antennas of varying configurations such as 580mM single rod, 200mM single rod and 3.5" FSL's.

For a first-time DX'er I would recommend a 200mM ferrite rod antenna using cheap Litz wire.? I say this because it is relatively easy and cheap to build, convenient to use and provides good performance for its size.? You can add shielding, rearrange the windings or use higher performance litz, easily at a later time.? As your experience and expertise blossom, you may consider making additional antennas but the 200 ferrite will provide a good start.

There is a wealth of information on ferrite rod antennas on the 'net - search "ferrite rod antenna construction".60; Unless you can use identical parts in constructing an existing loop, there are so many variables that some experimentation is inevitable.? If you begin with the mindset that "I am going to have to do some experimentation", you will be better equipped to get the best out of your components. ?One trick that I use is to wind more turns than I think I will need and then take turns off until it tunes as I want (removing turns is a lot easier than trying to add them).

As for power outages - they are a blessing.? In my part of suburbia, the man made noise is horrific.? When the power goes out (not often enough - curse the efficient distribution

company) a whole new world of RX opens up.? But then getting away from the noise is a good excuse for trips to the wilderness.? Another reason for a 200mM antenna - it is highly portable - even taking it to the park can sometimes get rid of a lot of man made noise.?; Carrying a 4 foot square air loop to the park is great for aerobic fitness but not for convenience.

Looks like my two cents turned into two dollars.? No matter, whatever path you finish up taking, I hope you get a lot of pleasure and satisfaction,

Ray

?
COLEMAK
The?keyboard layout for rational thinkers
Standard with Mac, Linux & Android.? Free for Windows
Training at http://thetypingcat.com/course/colemak?
(http://www.michaelcapewell.com/projects/keyboard/layout_capewell-dvorak.htm)

From: loopantennas@yahoogroups.com on behalf of rinus nienhuis dridotcom3@...
[loopantennas]
Sent: Saturday, 28 January 2017 6:06 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: lw loop
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Hi Alan
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I really appreciate it.
And i understand it, what you write.
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which size do i need, how many turns, which wire , how much capacitance?
is there a ratio?< is that the right word?>
Regards
rinus
and i will provoke complete power shutdown,,,locally....and see what happens to the signals..
Op 27 januari 2017 om 19:10 schreef "g8lco10@yahoo.co.uk [loopantennas]" :

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Hi Rinus,
Tuned circuit Q is sometimes called the "Quality Factor", it's how sharply the circuit resonates. So if you had a loop resonant at 1MHz (1000KHz) and a Q of 50 it will have a "bandwidth" of? f/Q = 1000/50=20 KHz?between the tuning points where the output is at half the peak power (-3dB).

Q has a multiplying effect on received signals, a loop with a? working Q of 200 will deliver four times (+12dB) more signal than a working Q of 50. This gain is noiseless unlike an active amplifier. A Q of 100-200 is not difficult to attain in a home made loop. If you had a 1m square loop of around 7 turns with a 500pF air spaced tuning capacitor with a 1 turn coupling loop to the receiver you should tune MW OK. More turns for LW, if the turns are around 5mm or 1/4" apart then the Q will be good, bundling the turns will greatly increase their capacitance and reduce the HF end of the tuning range as well as reducing the sensitivity.

There are Q meters available but they are a bit rare these days. A SDR receiver and a signal generator can be used, you find the two frequencies where the loop output is 3dB down, subtract to get the bandwidth then divide the mid frequency by the bandwidth?to reveal the Q?number.? A very rough test is how sharp the tuning is- if you wished the tuning knob was a lot bigger or you had a reduction gear because the tuning is sharp then you have a highish Q!!60;?

I would seriously suggest that you make your?gear portable so you can?experience the vast difference getting away from household wiring and appliances makes, there is a day and night difference!

As said a little transistor MW radio is a useful tool for detecting noise from wiring , bulbs, wall warts and many other appliances, you can quickly find the main noise generators. If you have battery powered gear then it might be worth just switching off all of the power for a few moments?to kill all of your own local noise and hear what happens.

Good DX,

Alan
G8LCO
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11779. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 18:31:24 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11779

Hi
You out gun me I use the Sony ICF 2010/2001D and the close 2nds Radio Shack DX 440 and Sangean ATS 803a.

Also refurbishing some antiques, Westinghouse RADA, Radiol IIIA, Steinite Crystal Radio and Sears Silvertone TRF Neutrodyne 8 tubes 4 RF Detector 3 Audio Push Pull and Rectifier.

I am doing what I call a Hybrid Retrofit using transistors in place of tubes to get things running and considering collecting tubes for a proper refurbish.

For a quick, & dirty & temporary loop try winding/taping around the glass of a window or sliding door; and for that matter any wood door.
73 de Jordan ve7jjd

On Sat, Jan 28, 2017 at 9:14 AM, rinus nienhuis dridotcom3@... [loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Dear Ray
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> i am very happy with your answer , Much more worth, than money, for me !
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> If you write: a 200 mM single rod, i think you mean a rod of 20 cm...?
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> and is your suggestion for MW, or LW or both?
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> and do i need also a amplifier with it\
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> how many turns of wire do i need approx
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> i am certainly willing to make it and experiment with it , but the same as
> with loop antenna's...
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> the problem i encounter is the very large amount of information
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> i am flooded through it..
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> that's the reason i started asking you on this list,all this questions
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> Again thanks
>
> Regards
>
> rinus
>
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>
> Op 27 januari 2017 om 23:58 schreef "Phillips phillicom@...
> [loopantennas]" <loopantennas@yahoogroups.com>:
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> Hi Rinus,
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> I thought that I might add my two cents' worth.
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> I have experimented with air loops of varying size and configuration both
> inside and outside as well as ferrite rod antennas of varying
> configurations such as 580mM single rod, 200mM single rod and 3.5" FSL's.
>
>
> For a first-time DX'er I would recommend a 200mM ferrite rod antenna using
> cheap Litz wire. I say this because it is relatively easy and cheap to
> build, convenient to use and provides good performance for its size. You
> can add shielding, rearrange the windings or use higher performance litz,
> easily at a later time. As your experience and expertise blossom, you may
> consider making additional antennas but the 200 ferrite will provide a good
> start.
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>
> There is a wealth of information on ferrite rod antennas on the 'net -
> search "ferrite rod antenna construction". Unless you can use identical
> parts in constructing an existing loop, there are so many variables that
> some experimentation is inevitable. If you begin with the mindset that "I
> am going to have to do some experimentation", you will be better equipped
> to get the best out of your components. One trick that I use is to wind
> more turns than I think I will need and then take turns off until it tunes
> as I want (removing turns is a lot easier than trying to add them).
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> As for power outages - they are a blessing. In my part of suburbia, the
> man made noise is horrific. When the power goes out (not often enough -
> curse the efficient distribution company) a whole new world of RX opens
> up. But then getting away from the noise is a good excuse for trips to the

> wilderness. Another reason for a 200mM antenna - it is highly portable -
> even taking it to the park can sometimes get rid of a lot of man made
> noise. Carrying a 4 foot square air loop to the park is great for aerobic
> fitness but not for convenience.
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> Looks like my two cents turned into two dollars. No matter, whatever path
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> *COLEMAK *
> *The keyboard layout for rational thinkers*
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> ----------
> *From:* loopantennas@yahoogroups.com <loopantennas@yahoogroups.com> on
> behalf of rinus nienhuis dridotcom3@... [loopantennas] <
> loopantennas@yahoogroups.com>
> *Sent:* Saturday, 28 January 2017 6:06 AM
> *To:* loopantennas@yahoogroups.com
> *Subject:* Re: [loopantennas] Re: lw loop
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> Hi Alan
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> Thanks a lot again , that you take the effort to make things clear for me
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> And i understand it, what you write.
> But it brings up new questions...
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> Has the used wire also influence on the Q?
> <maybe that explaines why litze wire is often used...>
> and is there a relationship or ratio between the size of the loop, how
> much windings, spacing, wire's used, capacitance
> and the frequency area where the loop is designed for?
> is there somewhere a diagram , where one can read :< for example>...
> i want to make a loop for VLF
> which size do i need, how many turns, which wire , how much capacitance?

> is there a ratio?< is that the right word?>
> Regards
> rinus
>
> and i will provoke complete power shutdown,,,locally....and see what
> happens to the signals..
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> Op 27 januari 2017 om 19:10 schreef "g8lco10@yahoo.co.uk [loopantennas]" <
> loopantennas@yahoogroups.com>:
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> Hi Rinus,
> Tuned circuit Q is sometimes called the "Quality Factor", it's how sharply
> the circuit resonates. So if you had a loop resonant at 1MHz (1000KHz) and
> a Q of 50 it will have a "bandwidth" of f/Q = 1000/50=20 KHz between the
> tuning points where the output is at half the peak power (-3dB).
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> Q has a multiplying effect on received signals, a loop with a working Q
> of 200 will deliver four times (+12dB) more signal than a working Q of 50.
> This gain is noiseless unlike an active amplifier. A Q of 100-200 is not
> difficult to attain in a home made loop. If you had a 1m square loop of
> around 7 turns with a 500pF air spaced tuning capacitor with a 1 turn
> coupling loop to the receiver you should tune MW OK. More turns for LW, if
> the turns are around 5mm or 1/4" apart then the Q will be good, bundling
> the turns will greatly increase their capacitance and reduce the HF end of
> the tuning range as well as reducing the sensitivity.
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> There are Q meters available but they are a bit rare these days. A SDR
> receiver and a signal generator can be used, you find the two frequencies
> where the loop output is 3dB down, subtract to get the bandwidth then
> divide the mid frequency by the bandwidth to reveal the Q number. A very
> rough test is how sharp the tuning is- if you wished the tuning knob was a
> lot bigger or you had a reduction gear because the tuning is sharp then you
> have a highish Q!!
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> I would seriously suggest that you make your gear portable so you
> can experience the vast difference getting away from household wiring and
> appliances makes, there is a day and night difference!
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> As said a little transistor MW radio is a useful tool for detecting noise
> from wiring , bulbs, wall warts and many other appliances, you can quickly
> find the main noise generators. If you have battery powered gear then it
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> kill all of your own local noise and hear what happens.
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> Good DX,
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> Alan

> G8LCO
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73 Jordan VE7JJD

11780. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-28 23:11:52 UTC
From: Maxwell Mclellan
Topic: 11750 Message: 11780

Greetings Rinus and Jordan. Some years ago I saw a door on the back of which had been made a flat loop. The door could be swung on its hinges to orientate for nulls etc. Been meaning to try it but "The Minister of War would not be happy" Regards to all .Max vk2tti.

Sent from my iPad

> On 29 Jan 2017, at 5:31 AM, Jordan Dobrikin jjdobrikin@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Hi
> You out gun me I use the Sony ICF 2010/2001D and the close 2nds Radio Shack DX 440 and Sangean ATS 803a.
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> Also refurbishing some antiques, Westinghouse RADA, Radiol IIIA, Steinite Crystal Radio and Sears Silvertone TRF Neutrodyne 8 tubes 4 RF Detector 3 Audio Push Pull and Rectifier.
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> I am doing what I call a Hybrid Retrofit using transistors in place of tubes to get things running and considering collecting tubes for a proper refurbish.
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> For a quick, & dirty & temporary loop try winding/taping around the glass of a window or sliding door; and for that matter any wood door.
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>> Again thanks
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>>> Op 27 januari 2017 om 23:58 schreef "Phillips phillicom@... [loopantennas]"
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>>> For a first-time DX'er I would recommend a 200mM ferrite rod antenna using cheap Litz wire. I say this because it is relatively easy and cheap to build, convenient to use and provides good performance for its size. You can add shielding, rearrange the windings or use higher performance litz, easily at a later time. As your experience and expertise blossom, you may consider making additional antennas but the 200 ferrite will provide a good start.
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>>> To: loopantennas@yahoogroups.com
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> --
> 73 Jordan VE7JJD
>
> Posted by: Jordan Dobrikin <jjdobrikin@...>
> Reply via web post • Reply to sender • Reply to group • Start a New Topic • Messages in this topic (24)

11781. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-29 09:20:17 UTC
From: rinus nienhuis
Topic: 11750 Message: 11781

Greetings Max !
Could it be, that we have , although you are from Australia and i from the Netherlands...that we have the same Minister of War?
Hihi
Regards
rinus
Op 29 januari 2017 om 0:11 schreef "Maxwell Mclellan vk2tti@... [loopantennas]" :

?
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that's the reason i started asking you on this list,all this questions

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Regards
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For a first-time DX'er I would recommend a 200mM ferrite rod antenna using cheap Litz wire.? I say this because it is relatively easy and cheap to build, convenient to use and provides good performance for its size.? You can add shielding, rearrange the windings or use higher performance litz, easily at a later time.? As your experience and expertise blossom, you may consider making additional antennas but the 200 ferrite will provide a good start.

There is a wealth of information on ferrite rod antennas on the 'net - search "ferrite rod antenna construction".? Unless you can use identical parts in constructing an existing loop, there are so many variables that some experimentation is inevitable.? If you begin with the mindset that "I am going to have to do some experimentation", you will be better equipped to get the best out of your components. One trick that I use is to wind more turns than I think I will need and then take turns off until it tunes as I want (removing turns is a lot easier than trying to add them).

As for power outages - they are a blessing.? In my part of suburbia, the man made noise is horrific.? When the power goes out (not often enough - curse the efficient distribution company) a whole new world of RX opens up.? But then getting away from the noise is a good excuse for trips to the wilderness.? Another reason for a 200mM antenna - it is highly portable - even taking it to the park can sometimes get rid of a lot of man made noise.? Carrying a 4 foot square air loop to the park is great for aerobic fitness but not for convenience.

Looks like my two cents turned into two dollars.? No matter, whatever path you finish up taking, I hope you get a lot of pleasure and satisfaction,

Ray

?
COLEMAK
The?keyboard layout for rational thinkers
Standard with Mac, Linux & Android.? Free for Windows

Training at http://thetypingcat.com/course/colemak?
(http://www.michaelcapewell.com/projects/keyboard/layout_capewell-dvorak.htm)

From: loopantennas@yahoogroups.com <loopantennas@yahoogroups.com> on behalf of rinus nienhuis dridotcom3@... [loopantennas] <loopantennas@yahoogroups.com>
Sent: Saturday, 28 January 2017 6:06 AM
To: loopantennas@yahoogroups.com
Subject: Re: [loopantennas] Re: lw loop
?
?
?
Hi Alan
Thanks a lot again , that you take the effort to make things clear for me
I really appreciate it.
And i understand it, what you write.
But it brings up new questions...
Has the used wire also influence on the Q?

and is there a relationship or ratio between the size of the loop, how much windings, spacing, wire's used, capacitance
and the frequency area where the loop is designed for?
is there somewhere a diagram , where one can read :< for example>...
i want to make a loop for VLF
which size do i need, how many turns, which wire , how much capacitance?
is there a ratio?< is that the right word?>
Regards
rinus
and i will provoke complete power shutdown,,,locally....and see what happens to the signals..
Op 27 januari 2017 om 19:10 schreef "g8lco10@... [loopantennas]" <loopantennas@yahoogroups.com>:

?
?
Hi Rinus,
Tuned circuit Q is sometimes called the "Quality Factor", it's how sharply the circuit resonates. So if you had a loop resonant at 1MHz (1000KHz) and a Q of 50 it will have a "bandwidth" of? f/Q = 1000/50=20 KHz?between the tuning points where the output is at half the peak power (-3dB).

Q has a multiplying effect on received signals, a loop with a? working Q of 200 will deliver four times (+12dB) more signal than a working Q of 50. This gain is noiseless unlike an active amplifier. A Q of 100-200 is not difficult to attain in a home made loop. If you had a 1m square loop of around 7 turns with a 500pF air spaced tuning capacitor with a 1 turn coupling loop to the receiver you should tune MW OK. More turns for LW, if the turns are around 5mm or 1/4" apart then the Q will be good, bundling the turns will greatly increase their capacitance and reduce the HF end of the tuning range as well as reducing the sensitivity.

There are Q meters available but they are a bit rare these days. A SDR receiver and a signal generator can be used, you find the two frequencies where the loop output is 3dB

down, subtract to get the bandwidth then divide the mid frequency by the bandwidth?to reveal the Q?number.? A very rough test is how sharp the tuning is- if you wished the tuning knob was a lot bigger or you had a reduction gear because the tuning is sharp then you have a highish Q!!??

I would seriously suggest that you make your?gear portable so you can?experience the vast difference getting away from household wiring and appliances makes, there is a day and night difference!

As said a little transistor MW radio is a useful tool for detecting noise from wiring , bulbs, wall warts and many other appliances, you can quickly find the main noise generators. If you have battery powered gear then it might be worth just switching off all of the power for a few moments?to kill all of your own local noise and hear what happens.

Good DX,

Alan
G8LCO
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73 Jordan VE7JJD
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Posted by: Jordan Dobrikin <jjdobrikin@...>
?
Reply via web post (https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11779;_ylc=X3oDMTJyZG8wZWcxBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTc3OQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0ODU2MjgyODc-?act=reply&messageNum=11779)
•
Reply to sender
•
Reply to group

•
Start a New Topic (https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJma2o2Y2kwBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0ODU2MjgyODc-)
•
Messages in this topic (https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11750;_ylc=X3oDMTM3a3V2NDUxBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTc3OQRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0ODU2MjgyODcEdHBjSWQDMTE3NTA-) (24)
?

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11782. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-29 16:24:46 UTC
From: rinus nienhuis
Topic: 11750 Message: 11782

Hi Bob
Thanks for the reply
Do you maybe have a photo of your loop?
Regards
rinus
Op 27 januari 2017 om 23:23 schreef "Dexter dexterdxer@... [loopantennas]" :

?
I have been using a 3-ft square tuned loop for 150 to 440 kHz with great success for many years. This is a "pancake4; loop, wound in a single plane. The coil consists of 80 turns of 22 AWG stranded wire. It is woven tennis-racket style on a wooden cross with holes drilled every 1/4 inch. The coil and tuning capacitor rotate 360 degrees laterally and 90 degrees vertically in order to produce excellent nulls in any direction.

There are a few basic points you need to consider. The signal is picked up by the coil. The capacitor is just there to provide resonance to the circuit. The values of inductance and capacitance at a given frequency are inversely proportional. Therefore, the tuned circuit should have the highest L/C ratio possible in order to optimize pickup.

In order to minimize capacitance, some effort should be made to lower the distributed capacitance of the coil. The distributed capacitance is partially a function of the shape of the coil. Given the same inductance, a pancake coil (vs. a solenoid shape) will have the least distributed capacitance.

You can feed the coil/capacitor with a characteristic low impedance in series with the transmission line. This however will place the transmission line and receiver in series with the tuned circuit at resonance and effectively lower the Q. My loop is fed from a pickup coil (3 turns, 8-inch diameter) mounted in the center of the primary coil. The primary coil and pickup coil thus form a transformer. This allows the main coil and capacitor forming the tuned circuit to "freewheel" in space under minimal load, and preserves the high Q. In fact, Q is high enough that the circuit must be repeaked every kHz.

Bob C.

This email has been checked for viruses by Avast antivirus software.
https://www.avast.com/antivirus

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11783. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-29 16:29:31 UTC
From: rinus nienhuis
Topic: 11750 Message: 11783

Dear Joris
thanks for the reply and help
When i have made my first experiments as suggested from other members, this will be a thing, i will also experiment with
dag Joris, tot ziens

Groet
rinus
Op 27 januari 2017 om 21:58 schreef "kthkit@xs4all.nl [loopantennas]" :

?
Dear Rinus,
Domestic noise is increasing indoors these days and if you want receiving indoors it will pick up the electric and magnetic noise component from switch regulator and alike.
If you want to suppress the domestic noise the best way is probably installing the ferrite loop above the roof noise level away from the source.
For indoor installing a ferrite loop antenne you can screen the loop for the electric field with a thin static wire screen not making short-circuit the RX field and so reduce the parasitic capacity and maintain the Q factor of the loop windings.
The noise from the electric field is reduced that way. Bud there is also noise in the magnetic component that may be reduced by turning the loop to de magnetic NUL from the source.
?
For an large air loop the windings should be screened also and that can be done with a RG214 coax loop and use the outer screen. On top it has a small open cap and not shorted the fields. The inner will be the loop itself and taken out from a small center gap below in the screen. The screen should below connect to ground.
A good description how to screen a ferrite loop can be found on this site from PA2OHH 60;?http://www.qsl.net/pa2ohh/07fer.htm handling this problem.
I have a professional Bendix ferrite loop antenne from an air craft automatic LW beacon direction finder with use also PA2OHH? his thin wire screening technique.
?
73” Joris’PE1KTH

?

?

11784. For Sale are two 7.5" X 7.5" FSL antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-29 21:58:14 UTC
From: everettsharp@...
Topic: 11784 Message: 11784
Attachments: 2 described; binary payloads are missing from this source WARC

I have for sale two custom built 7.5" X 7.5" FSL antennas. The FSLs were wound in a 2 coil Polydorff configuration. The 2 windings were wound with 660/46 Litz wire and the variable capacitors are the Russian high Q, 2 gang, with a 3:1 turning ratio. I added a band switch so the second gang can be switched in for extended band coverage. Both FSL are mounted on a Lazy Susan base.

Band (1) tunes from 2,000 to 420 KHz and Band (2) tunes from 575 to 275 KHz. The tuning is sharp and the rotational nulls are quite sharp. Both FSLs are setup for induction coupling.

I am asking $325 each, plus what ever the shipping cost would be. Below is a pictures of one of the FSLs. If interested please contact me off list everettsharp@....

I have built and sold several FSLs, however, these two will be the last I build for sale, as I have used up all of my ferrite inventory. Most of the sources of supply for the Russian ferrite bars have dried up. Each of the FSLs have around $150 in material cost and about 20 hours work each. These are one of a kind and can not be bought anywhere else.

Everett N4CY

11785. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-29 22:21:43 UTC
From: Jordan Dobrikin
Topic: 11750 Message: 11785

Steve Ratzlaff ratzlaffsteve@... [ultralightdx] <
ultralightdx@yahoogroups.com>
9:51 AM (4 hours ago)
to ultralightdx

Hi Steven,

As you note, of course air is the lowest loss spacer but it's not very easy to wind a coil spaced over ferrite using just air. :) Styrofoam is probably the next least-lossy dielectric, and can often be found in sheets of varying thickness where a single layer or maybe several layers add up to the correct coil spacing. As for Litz, if you can obtain some, try to get as many strands of #46 gauge as your budget allows. I would suggest that a minimum of 100 strands of Litz be used (100/46) otherwise the improvement over using plain non-Litz wire won't be much. 175/46 and 330/46 are common sizes and are good choices, with 330/46 working better. And then there's the "Big Litz" such as 660/46 which works even better but which is much more expensive. Also remember the larger Litz is larger in diameter so make sure your coil form width can handle the extra winding width, and also that you will need somewhat more turns for the larger size Litz you use, to tune the same frequency range using the same variable capacitor since the inductance for a given number of turns will decrease the larger the wire diameter that is used.

Good luck and please keep us informed of your experiments and results! And it must be fun to listen to Radio Caroline live; you're fortunate to be able to receive the signal, even in daytime.

73,

Steve AA7U

Arizona, USA

On 1/29/2017 10:17 AM, Steven mont633@... [ultralightdx] wrote:

On Sun, Jan 29, 2017 at 8:29 AM, rinus nienhuis dridotcom3@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Dear Joris
>
> thanks for the reply and help
>
> When i have made my first experiments as suggested from other members,
> this will be a thing, i will also experiment with

>
> dag Joris, tot ziens
>
>
> Groet
>
> rinus
>
> Op 27 januari 2017 om 21:58 schreef "kthkit@... [loopantennas]" <
> loopantennas@yahoogroups.com>:
>
>
>
> Dear Rinus,
>
> Domestic noise is increasing indoors these days and if you want receiving
> indoors it will pick up the electric and magnetic noise component from
> switch regulator and alike.
>
> If you want to suppress the domestic noise the best way is probably
> installing the ferrite loop above the roof noise level away from the source.
>
> For indoor installing a ferrite loop antenne you can screen the loop for
> the electric field with a thin static wire screen not making short-circuit
> the RX field and so reduce the parasitic capacity and maintain the Q factor
> of the loop windings.
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> The noise from the electric field is reduced that way. Bud there is also
> noise in the magnetic component that may be reduced by turning the loop to
> de magnetic NUL from the source.
>
>
>
> For an large air loop the windings should be screened also and that can be
> done with a RG214 coax loop and use the outer screen. On top it has a small
> open cap and not shorted the fields. The inner will be the loop itself and
> taken out from a small center gap below in the screen. The screen should
> below connect to ground.
>
> A good description how to screen a ferrite loop can be found on this site
> from PA2OHH
>
> http://www.qsl.net/pa2ohh/07fer.htm handling this problem.
>
> I have a professional Bendix ferrite loop antenne from an air craft
> automatic LW beacon direction finder with use also PA2OHH his thin wire
> screening technique.
>
>
>

> 73” Joris’PE1KTH
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>
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>

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73 Jordan VE7JJD

11786. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-29 22:50:02 UTC
From: Andy ZL3AG
Topic: 11750 Message: 11786

(Some of this is reposted from 2014 on this newsgroup)

For plastics used in RF, you're looking for the compounds with the lowest "loss tangent"/"dissipation factor" (which varies with frequency).

Teflon, polystyrene, polyethylene...

Pretty much anything but PVC!

If you can't buy decent capacitors made with it, it's no good for RF.

http://www.kayelaby.npl.co.uk/general_physics/2_6/2_6_5.html

See the last column. Compare PTFE to PVC.

http://www.dtic.mil/dtic/tr/fulltext/u2/746686.pdf has some lovely graphs.

Also, PVC for use in sunlight often has lead in the mix, although they are slowly phasing that out. It's not elemental lead, but still...

http://www.pvc.org/en/p/lead-stabilisers

As for sources of litz wire for LF work, consider scrapping some large quality SMPS's - they usually have inductors wound with it. Usually fairly meaty diameters. I'm not sure strand #'s, I've got a bucketful of them put aside for future LF use.

11787. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-31 02:50:42 UTC
From: g8lco10@...
Topic: 11750 Message: 11787

There is a simple and sensitive test for plastics that is very widely used. Put a small sample in a microwave oven along with a cup of cold water. Run the microwave for 5 seconds then touch the plastic. if it is warm then it is lossy, if cold then run with the cup of water for 60 seconds. If the plastic is warm then it is lossy at 2400MHz. Very sensitive test as losses at microwave frequency are very much greater than a few MHz..

In practice I doubt that ANY commercial PVC would contribute ANY significant loss at LF/MF, I would appreciate any factual data that Andy has on measured losses at say 1MHz in a Loop application. Although winding coils on plastic covered metal tubes is not a great idea. Don't laser PVC however! A lot of plastic plumbing is NOT PVC but Polypropylene.

Litz from switchers is made from a few strands of thick wire, not a great improvement over solid. Better litz has very many hair thin strands. Litz is not essential for rods or loops.

Alan
G8LCO

11788. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-31 04:58:13 UTC
From: Andy ZL3AG
Topic: 11750 Message: 11788

On 31/01/2017, at 3:50 PM, g8lco10@... [loopantennas] wrote:

> In practice I doubt that ANY commercial PVC would contribute ANY significant loss at LF/MF, I would appreciate any factual data that Andy has on measured losses at say 1MHz in a Loop application.

Haven't made any measurements yet. Have to dig the 8405A out of storage.

Considering we're trying to pull a signal out of the noise 5kHz way from a nearby powerhouse transmitter, high antenna Q is a great objective to strive for* - the "inverse garbage in garbage out" rule. High antenna Q comes from quality capacitors and inductors.

Spending big dollars on litz wire then winding it on a PVC former, you'd probably get better q from normal wire with air gap former while saving yourself a bunch of dollars.

* The "Q Multiplier + Spiral Loop Antenna (G Maynard design) I used to use with my Racal RA17L was so good, you could peak it on a portion of the sideband of the transmission you were listening to. The Q was so high, it required a capacitor with 3 reduction drives connected in series.

11789. Re: [loopantennas] Re: lw loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-01-31 14:19:30 UTC
From: Dexter
Topic: 11750 Message: 11789

On 1/30/2017 11:58 PM, Andy ZL3AG zl3ag@...
[loopantennas] wrote:
> Spending big dollars on litz wire then winding it on a PVC former,
> you'd probably get better q from normal wire with air gap former while
> saving yourself a bunch of dollars.
I understand the principles of Litz wire, and have used old antenna Litz
coils. Not being an engineer, I'm sure there are legitimate
applications. From a practical standpoint however, stranded hookup wire
has always worked well for me. (See below)
>
> * The "Q Multiplier + Spiral Loop Antenna (G Maynard design) I used to
> use with my Racal RA17L was so good, you could peak it on a portion of
> the sideband of the transmission you were listening to. The Q was so
> high, it required a capacitor with 3 reduction drives connected in series.
I reported similar results with my spiral (a.k.a. pancake) loop earlier
in this thread. 80 turns of 22 AWG stranded wire will produce a Q
necessitating retuning every kHz. In addition the large coil produces a
high effective height (mainly determined by the NA product (number of
turns times the area of each turn)).

Bob C.

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https://www.avast.com/antivirus

11790. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-01 04:12:37 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11790

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11791. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-01 04:12:37 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11791

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11792. Antique Radios

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-08 20:41:35 UTC
From: Jordan Dobrikin
Topic: 11792 Message: 11792

Hi
Looking for comment and advice.

A Senior Citizen SWL/Scanner Club and I are working on a retrofit/hybrid restore of some vintage Tube Radios.

We are looking into replacing the tubes with a low voltage, transistor, chip or PC Board amplifier.

We don't have working tubes. The intent is to prove out the rest of the components before going ahead to buy expensive vintage tubes.

A fringe benefit is eliminating the need for a big expensive multi voltage power supply.

ATWATER KENT BIG BOX MODEL 20 TUBE RADIO -VERY CLEAN - NO TUBES
<http://www.ebay.ca/itm/351970298271?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT>
(351970298271)

1921 Westinghouse Tube Radio Receiving RA Tuner DA Detector Amplifier RADA
<http://www.ebay.ca/itm/182395458754?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT>
(182395458754)

Vintage Early Homebrew Battery Powered Tube AM Radio Set 3 Tubes Black Front
<http://www.ebay.ca/itm/361853280867?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT>
(361853280867)
RCA RADIOLA III-A VINTAGE 1924 RADIO
<http://www.ebay.ca/itm/132031453070?_trksid=p2057872.m2749.l2649&ssPageName=STRK%3AMEBIDX%3AIT>

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(132031453070)

73 de Jordan VE7JJD

11793. Re: Foxhole set and such....

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-09 21:49:05 UTC
From: bcarusella@...
Topic: 4597 Message: 11793

I still haven't given up on finding mhatlau ta ask more about his uncle's radio. He mentions in another post his name is Mark Huss. If anyone knows him please let me know!
Thanks
Brian

11794. Re: [loopantennas] Antique Radios

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-10 01:43:38 UTC
From: Richard (Rick) Karlquist
Topic: 11792 Message: 11794

There was a company called Skytek at one time selling solid state tube
replacements for Collins radios. These were called:
"tubesters". Another device was the Teledyne FETtron.

It was reported that use of these things severely degraded
the performance of the radio (except in the audio output
stage). Since you only want to prove out the rest of the components,
you might be able to get away with a cheap and dirty circuit
that you are not going to use in the long run. For the
AM broadcast band at ~1 MHz, you should be able to just
use op amps of 50 MHz GBW product to get the very high
input simulating a grid. Radios this old probably
used triodes with moderately high output impedance so
you can just put a large resistor in series with the
op amp output for that. Should act like a tube.

Rick N6RK

On 2/8/2017 12:41 PM, Jordan Dobrikin jjdobrikin@...
[loopantennas] wrote:
>
>
> Hi
> Looking for comment and advice.
>
> A Senior Citizen SWL/Scanner Club and I are working on a retrofit/hybrid
> restore of some vintage Tube Radios.
>
> We are looking into replacing the tubes with a low voltage, transistor,
> chip or PC Board amplifier.
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> We don't have working tubes. The intent is to prove out the rest of the
> components before going ahead to buy expensive vintage tubes.
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> A fringe benefit is eliminating the need for a big expensive multi
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DX%3AIT>
> (132031453070)
>
> 73 de Jordan VE7JJD
>
>

11795. Re: [loopantennas] Antique Radios

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-10 02:18:37 UTC
From: Will Kimber
Topic: 11792 Message: 11795

If you only want a quick test make your own fetron, j-Fet with video
(high voltage) transistor in cascode.

Should be a lot cheaper than tubes for permanent replacements if it works.

Cheers,
Will

On 02/10/2017 02:43 PM, 'Richard (Rick) Karlquist' richard@...
[loopantennas] wrote:
>
> There was a company called Skytek at one time selling solid state tube
> replacements for Collins radios. These were called:
> "tubesters". Another device was the Teledyne FETtron.
>
> It was reported that use of these things severely degraded
> the performance of the radio (except in the audio output
> stage). Since you only want to prove out the rest of the components,
> you might be able to get away with a cheap and dirty circuit
> that you are not going to use in the long run. For the
> AM broadcast band at ~1 MHz, you should be able to just
> use op amps of 50 MHz GBW product to get the very high
> input simulating a grid. Radios this old probably
> used triodes with moderately high output impedance so
> you can just put a large resistor in series with the
> op amp output for that. Should act like a tube.
>
> Rick N6RK
>
> On 2/8/2017 12:41 PM, Jordan Dobrikin jjdobrikin@...
> [loopantennas] wrote:
> >
> >
> > Hi
> > Looking for comment and advice.
> >
> > A Senior Citizen SWL/Scanner Club and I are working on a retrofit/hybrid
> > restore of some vintage Tube Radios.
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> > We are looking into replacing the tubes with a low voltage, transistor,
> > chip or PC Board amplifier.
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> > components before going ahead to buy expensive vintage tubes.
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DX%3AIT>
> > (132031453070)
> >
> > 73 de Jordan VE7JJD
> >
> >
>
>

11796. Pixel Pro-1B loop - Amplifier questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-19 17:37:13 UTC
From: singleshare@...
Topic: 11796 Message: 11796

I've had a Z1501F active antenna from Clifton Labs for a number of years now (RIP Jack). I also have the Z1203B Power Injector. The Antenna has been an excellent performer, however I've been in the mood to tinker a bit.

I've come across a nicely priced DXE-RFPRO1B-PA, which is the amplifier used for the Pixel Pro-1B. I'm also looking to buy the Loop Antenna (just the loop) that DXE seels for $149.00.

I figure I can just use the Z1203B power injector for the Pixel Pro amplifier. I'm curious though how similar the Pixel Pro amplifier might be to the Z1501F. I wonder if i can use them interchangeably? Loop on either, active whip on either?

Thanks for any thoughts.

11798. Re: [loopantennas] Pixel Pro-1B loop - Amplifier questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-20 11:03:17 UTC
From: everettsharp@...
Topic: 11796 Message: 11798

Yes you can do what you are suggesting. I have that set up now. I have a Dowkey relay outside and switch back and forth between my loop and the Clifton E Probe whip.

Everett N4CY

In a message dated 2/19/2017 10:35:01 P.M. Central Standard Time, loopantennas@yahoogroups.com writes:

I've had a Z1501F active antenna from Clifton Labs for a number of years now (RIP Jack).
I also have the Z1203B Power Injector. The Antenna has been an excellent performer, however I've been in the mood to tinker a bit.

I've come across a nicely priced DXE-RFPRO1B-PA, which is the amplifier used for the Pixel Pro-1B. I'm also looking to buy the Loop Antenna (just the loop) that DXE seels for $149.00.

I figure I can just use the Z1203B power injector for the Pixel Pro amplifier. I'm curious though how similar the Pixel Pro amplifier might be to the Z1501F. I wonder if i can use them interchangeably? Loop on either, active whip on either?

Thanks for any thoughts.

11799. Re: [loopantennas] Pixel Pro-1B loop - Amplifier questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-20 18:22:01 UTC
From: JRTOW3RD@...
Topic: 11796 Message: 11799

Years ago, not long after buying my Pixel RF Pro-1a, Pixel introduced the Pro-1b with both an 'improved' pre-amp and loop. After forwarding pix of my pre-amp & loop, it was established that I had the 1b pre-amp and 1a loop - they offered me an updated loop for the same price you quoted - even offered to throw in a 12V power inserter, after warning me that the voltage would be below the pre-amps three terminal regulator's minimum required input voltage for 'proper' operation. The P-92 Power Inserter that came with my Pro-1a supplies +20V DC at up to 150 mA on the pre-amp's feed. A 12V DC inserter would have been welcome after the nearby tornado strike of 1/13, which killed my AC power for days after clearing my deck of everything except the apron mounted Pixel 'lollipop', which had wound up tight all the RG-6QS. When power was restored, it worked fine - but after the power company reset their poles and lines, I had RFI from three directions, so, after almost 36 years there, I moved to a garden home with a tall walkup attic - and a no outside antenna edict from the HOA. The Pixel loop is on a 5ft mast in a tripod base resting on the floored part of the attic and yields the clearest reception I've ever had - no doubt the underground utilities help. I don't miss my antenna farm... I even had ladder line feeding wire antennas, which included 150ft lw, TTFD, Slopers, dipoles, trap dipoles, and an E-probe. Many of my huge pines and oaks, including all tof my wire support trees, fell to weather or disease. The Pro-1a resurrected my SWL hobby - even more so after I moved.

Everett, I thought that the Pixel loop is relatively lo-Z - and it's amp is a lo-Z input - which the Clfton E-probe pre-amp isn't. How do you accommodate the difference? Does your Clifton amp work well on 12V? Are his amps (Z1501 ??) still available. Oh, I still use your LW loop! Thanks!

John

11800. Re: [loopantennas] Pixel Pro-1B loop - Amplifier questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-20 19:43:32 UTC
From: Everett Sharp
Topic: 11796 Message: 11800

John,

I use the higher voltage for for both. The Pixel has a voltage regulator, so no problem. 50 ohms- 75 ohms no big deal. Jack Smith said it was okay to do it.

Everett N4CY

Everett

Sent from my iPad

> On Feb 20, 2017, at 12:22 PM, JRTOW3RD@... [loopantennas] <loopantennas@yahoogroups.com> wrote:
>
> Years ago, not long after buying my Pixel RF Pro-1a, Pixel introduced the Pro-1b with both an 'improved' pre-amp and loop. After forwarding pix of my pre-amp & loop, it was established that I had the 1b pre-amp and 1a loop - they offered me an updated loop for the same price you quoted - even offered to throw in a 12V power inserter, after warning me that the voltage would be below the pre-amps three terminal regulator's minimum required input voltage for 'proper' operation. The P-92 Power Inserter that came with my Pro-1a supplies +20V DC at up to 150 mA on the pre-amp's feed. A 12V DC inserter would have been welcome after the nearby tornado strike of 1/13, which killed my AC power for days after clearing my deck of everything except the apron mounted Pixel 'lollipop', which had wound up tight all the RG-6QS. When power was restored, it worked fine - but after the power company reset their poles and lines, I had RFI from thre e directions, so, after almost 36 years there, I moved to a garden home with a tall walkup attic - and a no outside antenna edict from the HOA. The Pixel loop is on a 5ft mast in a tripod base resting on the floored part of the attic and yields the clearest reception I've ever had - no doubt the underground utilities help. I don't miss my antenna farm... I even had ladder line feeding wire antennas, which included 150ft lw, TTFD, Slopers, dipoles, trap dipoles, and an E-probe. Many of my huge pines and oaks, including all tof my wire support trees, fell to weather or disease. The Pro-1a resurrected my SWL hobby - even more so after I moved.
>
> Everett, I thought that the Pixel loop is relatively lo-Z - and it's amp is a lo-Z input - which the Clfton E-probe pre-amp isn't. How do you accommodate the difference? Does your Clifton amp work well on 12V? Are his amps (Z1501 ??) still available. Oh, I still use your LW loop! Thanks!
>
> John
>
>

11801. Re: [loopantennas] Pixel Pro-1B loop - Amplifier questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-20 19:59:46 UTC
From: singleshare@...
Topic: 11796 Message: 11801

The Z1203B power coupler has an adjustable output from 9V - 24V.
http://cliftonlaboratories.com/z1203b_coupler.htm
http://cliftonlaboratories.com/z1203b_coupler.htm

The Z1501F variant of the active antenna uses 20V while the Z1501D uses 13.8V.

Since the Z1501F and Pro-1B both use 20V I like the idea of switching between the two.

DX Engineering aquired Clifton Labs. I guess it remains to be seen what products will be on the market.

11802. Re: [loopantennas] Pixel Pro-1B loop - Amplifier questions

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-21 00:03:44 UTC
From: Jordan Dobrikin
Topic: 11796 Message: 11802

Hi

Does anyone have any experience With the McKay Dymek Active Antenna
Control Box with other Active Antennas?

http://www.prc68.com/I/DR33.shtml#DA100

The DA-100 is an active whip antenna covering the LF through HF bands.
It's a very good disign even by today's standards for use in the LF area.
Although the schematic for the indoor power supply looks straight forward
the design of the AC transformer is very sophisticated in that it blocks
LF signals coming in on the power line. Something the AMRAD active whip
power supply did not do as well, but they made provision to run from a
battery.

---

http://www.ebay.co.uk/itm/Stoner-McKay-Dymek-DA-100D-Active-HF-Antenna-Power-Supply-Contro
l-Box-/192098695796?hash=item2cb9f97a74:g:YBIAAOSwmmxW33AM

Stoner McKay Dymek DA-100D Active Indoor/ Outdoor HF Antenna Power Supply
Control Box

Details:

-
*Active Indoor/ Outdoor HF Antenna Power Supply Control Box *
- This general coverage active offers great receive performance from 500
kHz to 30 MHz.
- The DA-100D can be run from 110-120 or 12 VDC (2.5 mm jack).
- A 110 VAC wall-type power supply is provided.
- Output impedance is selectable at 50, 100 or 500 ohms.
- A three position attenuator is also featured (0, -10 and -20 dB).
- The output jack to the receiver is an RCA phono jack.

Specifications:

Manufacturer:* Stoner McKay Dymek*
Part Number:* DA-100D*

Also Known As:
DA100D

I Have a Hula Hoop PC Board and a Russian Preamp to go with to go with four
foot diameter Magnetic Loops on the 8th floor balcony of a concrete and
steel building.

http://dl2kq.de/ant/3-96.htm
Varactor Voltage Filter?
Jordan Dobrikin <jjdobrikin@...>
to Anton
Hi
As I see it C9, R5, C1, & R1 is smoothing filter. Are they necessary if the variable voltage power supply is well filtered? Also is there an English version of the text?
73 de Jordan ve7jjd
to me Russian English Translate message Turn off for: Russian
Hello, Jordan.
Yes, it is filter. If you use long wires from power supply to preamp you need it. If you use short wire I think you can remove this filter. But I would keep it. Unfortunately only russian version, but you can write to the author DL2KQ, I think he knows English and can translate :)
Понедельник, 14 ноября 2016, 10:18 +08:00 от Jordan Dobrikin <jjdobrikin@...>:
Power receiving antenna
The differential amplifier for receiving the frame and ferrite antenna. For receiving loop antennas (such as "flags") requires an amplifier. With the noise and gain no problems. This is easy to do.
But such an antenna because of the small useful signal from the amplifier requires a very high attenuation coefficient of the in-phase component (CMRR CMRR or English from the Common-Mode Rejection Ratio), as otherwise made braided power cable spurious signals completely spoil the work of the antenna (which is often the case and is the source of the opinion that such antennas operate as himself).
The easiest way to implement it, making a differential amplifier with a large CMRR. And the need is power. Structural type of scheme balun + unbalanced power will not give a good result. Even the best such transformers, common mode rejection ratio of 1.8 and 3,6 MHz (and receiving antennas are needed mainly on the low bands) rarely exceeds 40 dB (talk about high impedance transformers). But that is not enough: a typical receiving antenna gain -30 dBi, its ratio F / B another 20 ... 30 dB, then we need a minimum of 50 ... 60 dB attenuation in-phase component.
Differential is such suppression may be amplifiers. But they need to be integrated. The idea to make difkaskad discrete transistors is divided on almost impossible to find a pair of transistors with an accuracy of 0.3 ... 0.1% (this is the same 50 ... 60 dB suppression, only expressed as a percentage).
Average performance of differential stage op amp provides a suppression, but it has to have the disadvantage that the input impedances of both inputs are obtained by different. From this dish loses its symmetry.
Decision fully satisfies us is the use of a specialized differential amplifier AD8129 . Below 4 MHz it has the CMRR higher than 80 (!) DB and two differential inputs with an equal and very high (> 4 MOhm) impedance.
AD8129 separate advantage is that the differential inputs are used to set the gain, i.e. they do not need to load anything extra.
Schematic of the amplifier circuit is shown in the following figure. Black elements on it are shown mounted in any case, the red - only when the

magnetic antenna with the ferrite, green - only when the frame.
The gain (in this case, it is equal to 30) is given by the ratio of voltage R7 / R6 resistors. These resistors have no effect on the input impedance on the working inputs (pins 1 and 8 chips DA1).
Power bipolar chips (note, in the scheme of two different ground). Filters L1-C2-C4 and L2-C3-C5 unleash the power (this is in addition to the CMR). The mid-point (ground amplifier) defines stabilizer DA2.
Power to the amplifier can be supplied by a common coaxial cable (as shown). For further isolation from the dirt on the outside of the braid mounted decoupling choke T2. He wound LF ferrite core, inductance> 1 mH. RF choke L4 divides the power and output RF signals.
If the power is supplied to the amplifier not coax, and on a separate line, L4 is not necessary, and T2 is two-winding. In this case, both windings T2 are wound in one direction (as in any power throttle) 12 and the voltage + V is applied to the second input through DA2 winding T2.
The output of the amplifier through R8 is connected to the separation of HF transformer T1, a low interturn capacitance and the winding ratio of 1: 1. This transformer is needed to isolate the common-mode signal between the amplifier ground and the braid of the coaxial drop cable. Resistor R8 coordinates transformer T1 (DA1 at the very low output impedance).
Protective diodes VD7 VD8 (any silicon high) to prevent overloading the receiver (DA1 may issue up to 5 V amplitude, which is not like all receivers). C7 separation.
L3 elements C10 shared shack in the power of the amplifier and the receiver input.
Inductors L3, L4 inductance of 200 uH and above.
But back to the door of the shack amplifier: terminals 1 and 8 DA1. As already mentioned, this high-impedance differential inputs with high (> 80 dB) CMRR. They need to solve three problems:
Snap DC. This is done by resistors R3, R4. Their face value is not very important (in addition to working with a ferrite magnetic antenna, see below.) From 100 k to 1 M. But desperately important that they are identical: they will have to pick up the digital tester with honors no more than 0.1% (preferably less). Otherwise, they skewed input of the amplifier, with a corresponding decrease in AUC.
Protect entrances at the transmitter. Couple VD5 RF diodes, VD6 to deal with it.
Connect the antenna and the necessary elements to it. It depends on which antenna will be used:
If apertodicheskaya frame, such as the "flag", it is connected directly to the inputs. Additionally, the resistor R2 is set with a resistance equal to the input frame (typically a few hundred ohms)
If this ferrite magnetic resonance antenna or 1 ... 2 Coiled frame, R2 is absent, and the restructuring are set varicap VD1 -VD4 (I used BB640) and management of the chain of the shack: R1, R5, C1, C9 . In addition, when working with a ferrite magnetic antenna (MA) is necessary to reflect on the nominal value of R3 and R4. It defines the quality factor of the antenna circuit (of course, in addition to single quality factor of the antenna coil). Depending on the inductance, single Q MA and the desired bandwidth

(no adjustment) and select ratings R3, R4.
The following figure shows the spectrum in the band 100 kHz at the output of the amplifier described with denominations R3 R4 390 k and attached ferrite magnetic antenna on the rod with a diameter of 400 μ = 8 mm and 100 mm in length. The range of 160 meters, the antenna is located inside the building, so in addition to the useful signals can be seen more and a lot of noise and the degree of attenuation:
The output level of terrestrial noise resonance MA is - 93 dBm (the vertical scale in the figure in dBm), ie 5 uV, which roughly corresponds to the level of noise with a full-sized antenna. If you need to change the gain, then it is done divider R7 / R6. AD8129 can provide a gain of up to 100 times on the low HF bands.
Of course, for normal reception, the antenna should be brought somewhere far away and higher up on local sources of interference.
Update on 01/14/2015. That review UK8AFV described in the amplifier. There have just above the circuit board.
Beer Sheva, 26.09.2014

On Mon, Feb 20, 2017 at 11:59 AM, singleshare@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> The Z1203B power coupler has an adjustable output from 9V - 24V.
> http://cliftonlaboratories.com/z1203b_coupler.htm
>
> The Z1501F variant of the active antenna uses 20V while the Z1501D uses
> 13.8V.
>
> Since the Z1501F and Pro-1B both use 20V I like the idea of switching
> between the two.
>
> DX Engineering aquired Clifton Labs. I guess it remains to be seen what
> products will be on the market.
>
>
>

--
73 Jordan VE7JJD

11803. Check out what I found on eBay!

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-25 05:08:01 UTC
From: Jordan Dobrikin
Topic: 11803 Message: 11803

Hi! I found this on eBay and thought you might like it! Check it out now!
30 pcs Vintage Ferrite Rod 8mm x 160mm For Crystal Radio
http://r.ebay.com/FTjMYd

Hi
FYI
73 de Jordan ve7jjd

11804. Re: Check out what I found on eBay!

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-27 22:26:43 UTC
From: alienrelics@...
Topic: 11803 Message: 11804

That's a pretty good price. I see you can get them in smaller sets for similar prices each.

Steve Greenfield AE7HD

11805. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-28 01:57:46 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11805

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /620F-2A Crossed Loop/1- 620F-2.jpg
Uploaded by : sgm460122 <sgm460122@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/620F-2A%20Crossed%20Loop/1-%20620F-2.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

sgm460122 <sgm460122@...>

11806. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-28 01:55:59 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11806

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /620F-2A Crossed Loop/620-DOC-003.jpg
Uploaded by : sgm460122 <sgm460122@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/620F-2A%20Crossed%20Loop/620-DOC-003.jpg

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

sgm460122 <sgm460122@...>

11807. Insulators

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-28 02:51:19 UTC
From: Francis S
Topic: 11807 Message: 11807

Just spent most of the afternoon attempting to raise my 80 meter sky loop antenna. I had ropes slung over the trees at four points and measured out the almost 300 feet of wire. I thought it would be an "easy" task using those dog bone insulators at the attach points to run the wire thru from one to the other..... I thought the wire would ride inside the insulator and I could just pull the wire feeding one to the next.... boy, was I wrong! Was it friction or what..... the wire would not feed easily, I had to pay out maybe 30 feet and then pull it thru the next point and then back to the first one.... on and on and on. Perhaps there might be some other type of insulator available that would allow for the wire to float more easily, or I could get some help to make the job go faster! Just wondering what other guys have been using for this necessary piece of the construction.

Francis
WA3GGV

11808. Re: [loopantennas] Insulators

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-28 03:35:17 UTC
From: Van Lincoln
Topic: 11807 Message: 11808

Small Pulleys at each corner.

73 wd8aam

At 20:51 2/27/2017, you wrote:

Just spent most of the afternoon attempting to raise my 80 meter sky loop antenna. I had ropes slung over the trees at four points and measured out the almost 300 feet of wire. I thought it would be an ";easy" task using those dog bone insulators at the attach points to run the wire thru from one to the other..... I thought the wire would ride inside the insulator and I could just pull the wire feeding one to the next.... boy, was I wrong! Was it friction or what..... the wire would not feed easily, I had to pay out maybe 30 feet and then pull it thru the next point and then back to the first one.... on and on and on. Perhaps there might be some other type of insulator available that would allow for the wire to float more easily, or I could get some help to make the job go faster! Just wondering what other guys have been using for this necessary piece of the construction.

Francis
WA3GGV

11809. Re: [loopantennas] Insulators

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-28 03:39:01 UTC
From: Dick Bingham
Topic: 11807 Message: 11809

Hello

The relative inflexibility of the wire going around corners is the problem. The metal probably "work hardens"
as it bends around each insulator and gets progressively harder as each new insulator is accessed.

I suspect all (well, 75% of it) of the wire will have to be pulled thru the first insulator, then half pulled thru the
2nd and then one quarter pulled thru the 3rd and the two ends joined
together at the 4th.

Good luck with your project . . .

73 Dick w7wkr/7 at CN97uj

On Mon, Feb 27, 2017 at 6:51 PM, Francis S fsurovec@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

>
>
> Just spent most of the afternoon attempting to raise my 80 meter sky loop
> antenna. I had ropes slung over the trees at four points and measured out
> the almost 300 feet of wire. I thought it would be an "easy" task using
> those dog bone insulators at the attach points to run the wire thru from
> one to the other..... I thought the wire would ride inside the insulator
> and I could just pull the wire feeding one to the next.... boy, was I
> wrong! Was it friction or what..... the wire would not feed easily, I had
> to pay out maybe 30 feet and then pull it thru the next point and then
> back to the first one.... on and on and on. Perhaps there might be some
> other type of insulator available that would allow for the wire to float
> more easily, or I could get some help to make the job go faster! Just
> wondering what other guys have been using for this necessary piece of the
> construction.
>
> Francis
> WA3GGV
>
>
>

11810. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-28 06:42:24 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11810

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /620F-2A Crossed Loop/Loop Antennas
Uploaded by : jonsperberg <jonsperberg@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/620F-2A%20Crossed%20Loop/Loop%20Antennas

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

jonsperberg <jonsperberg@...>

11811. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-01 04:19:33 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11811

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11812. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-01 04:19:34 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11812

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11813. Antique Radio Tube Replacment

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-02 03:47:50 UTC
From: Jordan Dobrikin
Topic: 11813 Message: 11813

Hi

I am looking for Comment(s) Advice & Help in coming up with Transistor design(s) and/or modern day Low Voltage Hollowstate replacement (s) for Vintage Tubes like the 01A and 226. The aim is to have a single Wall Wart Power Supply.

Jordan Dobrikin
809-1850 Rosser Ave.
Burnaby British Columbia
Canada V5C 5E1

Note the Schematics below are typical examples but without the the neutralizing condensers

http://earlyradiohistory.us/1923neu.htm

[image: Figure 2]

[image: layout 1]

[image: layout 2]

[image: Figure 1][image: Figure 2]

--
73 Jordan VE7JJD

11814. Re: [loopantennas] Insulators

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-02-28 09:16:39 UTC
From: blumu
Topic: 11807 Message: 11814

Could you use non-rusting pulleys on the hot ends of the dog-bone insulators?

MichaelUK
.....

On 28.02.17 03:39, Dick Bingham dick.bingham@... [loopantennas] wrote:
>
>
> Hello
>
> The relative inflexibility of the wire going around corners is the
> problem. The metal probably "work hardens"
> as it bends around each insulator and gets progressively harder as each
> new insulator is accessed.
> ...
> 73 Dick w7wkr/7 at CN97uj
>
> On Mon, Feb 27, 2017 at 6:51 PM, Francis S fsurovec@... wrote:

> Just spent most of the afternoon attempting to raise my 80 meter sky
> loop antenna. ... I thought the wire
> would ride inside the insulator and I could just pull the wire
> feeding one to the next.... boy, was I wrong! Was it friction or
> what... the wire would not feed easily, ...
> Francis
> WA3GGV

11815. Re: [loopantennas] Insulators

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-02 20:11:36 UTC
From: Jordan Dobrikin
Topic: 11807 Message: 11815

Hi
Use Large diameter sailboat Blocks (pulleys).
The ones for Line (rope) will also act as an insulator.
The one's for Wire will be weather proof metal
73 de Jordan ve7jjd

On Tue, Feb 28, 2017 at 1:16 AM, blumu blumu@btinternet.com [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Could you use non-rusting pulleys on the hot ends of the dog-bone
> insulators?
>
> MichaelUK
> .....
>
> On 28.02.17 03:39, Dick Bingham dick.bingham@... [loopantennas]
> wrote:
> >
> >
> > Hello
> >
> > The relative inflexibility of the wire going around corners is the
> > problem. The metal probably "work hardens"
> > as it bends around each insulator and gets progressively harder as each
> > new insulator is accessed.
> > ...
> > 73 Dick w7wkr/7 at CN97uj
> >
> > On Mon, Feb 27, 2017 at 6:51 PM, Francis S fsurovec@... wrote:
>
> > Just spent most of the afternoon attempting to raise my 80 meter sky
> > loop antenna. ... I thought the wire
> > would ride inside the insulator and I could just pull the wire
> > feeding one to the next.... boy, was I wrong! Was it friction or
> > what... the wire would not feed easily, ...
> > Francis
> > WA3GGV
>
>

--
73 Jordan VE7JJD

11816. Re: Antique Radio Tube Replacment

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-04 16:22:38 UTC
From: mrk_muller@...
Topic: 11813 Message: 11816

Hello Jordan,

You can give this link a try for the 01A. Just go to the thumbnails on the right-hand side of the page for schematic details.

http://www.greenhillsgf.com/Project_SS-Tubes.htm
http://www.greenhillsgf.com/Project_SS-Tubes.htm

Here's another article, using MOSFETs to directly replace triodes (e.g., the 226). Since you are working at lower voltages, your job might be even easier.

http://www.geofex.com/Article_Folders/mosfet_folly/mosfetfolly.htm
http://www.geofex.com/Article_Folders/mosfet_folly/mosfetfolly.htm

Lots of stuff on the Internet with respect to tube replacement using transistors, etc. If these links don't quite do it for you, then you can use some of the key words in these articles and your friend Google to find better sources.

I wish you good fortune in your search! mvm.

11817. Mag Loop Conductor

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-08 01:00:40 UTC
From: Jordan Dobrikin
Topic: 11817 Message: 11817

Hi

The ultimate for Low Inductance; High Q; Electrically Small Resonant Loop,
for MW & HF receiving ??? !!!!

73

Skip to main content
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Games & ConsolesEverything Else
Advanced <http://www.ebay.com/sch/ebayadvsearch>

- Hi *Jordan*!
<http://www.ebay.com/itm/12-ft-Capillary-Tubing-Jb-Industries-TC-70-12-/222387314720#>
- Daily Deals <http://deals.ebay.com/>
- Gift Cards <http://www.ebay.com/rpp/gift-cards>
- Help & Contact <http://ocs.ebay.com/ws/eBayISAPI.dll?CustomerSupport>
- [image: Shop now] <http://www.ebay.com/rpp/spring>

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- >
- Refrigeration <http://www.ebay.com/sch/Refrigeration-/64007/i.html>

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[image: Zoro Tools 99.7% Positive feedback]
<http://stores.ebay.com/Zoro-Tools?_trksid=p2047675.l2563>
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<http://stores.ebay.com/Zoro-Tools?_trksid=p2047675.l2563>
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<http://contact.ebay.com/ws/eBayISAPI.dll?ShowCoreAskSellerQuestion&redirect=0&requested=zorotools&iid=222387314720>
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shipping options. | See details
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Item location:
United States, United States

Ships to:
United States See exclusions
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Delivery:
Varies
Payments:
[image: PayPal] [image: Visa/MasterCard, Amex, Discover]
Credit Cards processed by PayPal
See *payment*details
<http://www.ebay.com/itm/12-ft-Capillary-Tubing-Jb-Industries-TC-70-12-/222387314720#payCntId>
Returns:
30 days money back, buyer pays return shipping | See details

<http://www.ebay.com/itm/12-ft-Capillary-Tubing-Jb-Industries-TC-70-12-/222387314720#rpdCntId>
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- [image: Capillary Tubing, JB Industries, COPPER, .042 ID x .093 OD x
12 Feet, #TC-42-12]

Capillary Tubing, JB Industries, COPPER, .042…

<http://www.ebay.com/itm/Capillary-Tubing-JB-Industries-COPPER-042-ID-x-093-OD-x-12-Feet-TC-42-12/401138226153?_trksid=p2047675.c100005.m1851&_trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D2%26asc%3D41668%26meid%3D5f91739e75db48f3adfad5c7aa42d0bc%26pid%3D100005%26rk%3D1%26rkt%3D6%26sd%3D222387314720>

$13.95

+ $16.00

- [image: Capillary Tubing, JB Industries, COPPER, .070 ID x .125 OD x
12 Feet, #TC-70-12]

Capillary Tubing, JB Industries, COPPER, .070…

<http://www.ebay.com/itm/Capillary-Tubing-JB-Industries-COPPER-070-ID-x-125-OD-x-12-Feet-TC-70-12/152250379495?_trksid=p2047675.c100005.m1851&_trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D2%26asc%3D41668%26meid%3D5f91739e75db48f3adfad5c7aa42d0bc%26pid%3D100005%26rk%3D2%26rkt%3D6%26mehot%3Dlo%26sd%3D222387314720>

$16.81

+ $14.00

Last one

- [image: Capillary Tubing, JB Industries, COPPER, .080 ID x .145 OD x
10 Feet, TC-80-10]

Capillary Tubing, JB Industries, COPPER, .080…

<http://www.ebay.com/itm/Capillary-Tubing-JB-Industries-COPPER-080-ID-x-145-OD-x-10-Feet-TC-80-10/401236522766?_trksid=p2047675.c100005.m1851&_trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D2%26asc%3D41668%26meid%3D5f91739e75db48f3adfad5c7aa42d0bc%26pid%3D100005%26rk%3D3%26rkt%3D6%26sd%3D222387314720>

$15.95

+ $14.00

- [image: Capillary Tubing, JB Industries, COPPER, .075 ID x .125 OD x 9
Feet, #TC-75-9]

Capillary Tubing, JB Industries, COPPER, .075…

<http://www.ebay.com/itm/Capillary-Tubing-JB-Industries-COPPER-075-ID-x-125-OD-x-9-Feet-TC-75-9/401088377342?_trksid=p2047675.c100005.m1851&_trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D2%26asc%3D41668%26meid%3D5f91739e75db48f3adfad5c7aa42d0bc%26pid%3D100005%26rk%3D4%26rkt%3D6%26sd%3D222387314720>

$13.95

+ $24.95

- [image: Capillary Tubing, JB Industries, COPPER, .090 ID x .145 OD x 7
Feet, #TC-90-7]

Capillary Tubing, JB Industries, COPPER, .090…

<http://www.ebay.com/itm/Capillary-Tubing-JB-Industries-COPPER-090-ID-x-145-OD-x-7-Feet-TC-90-7/401242914093?_trksid=p2047675.c100005.m1851&_trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D2%26asc%3D41668%26meid%3D5f91739e75db48f3adfad5c7aa42d0bc%26pid%3D100005%26rk%3D5%26rkt%3D6%26sd%3D222387314720>

$13.97

+ $29.95

- [image: Capillary Tubing, JB Industries, COPPER, .085 ID x .145 OD x 9
Feet, #TC-85-9]

Capillary Tubing, JB Industries, COPPER, .085…

<http://www.ebay.com/itm/Capillary-Tubing-JB-Industries-COPPER-085-ID-x-145-OD-x-9-Feet-TC-85-9/400900445063?_trksid=p2047675.c100005.m1851&_trkparms=aid%3D222007%26algo%3DSIC.MBE%26ao%3D2%26asc%3D41668%26meid%3D5f91739e75db48f3adfad5c7aa42d0bc%26pid%3D100005%26rk%3D6%26rkt%3D6%26sd%3D222387314720>

$19.95

+ $24.95

Report item
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Seller assumes all responsibility for this listing.
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Item specifics

Condition:
New: A brand-new, unused, unopened, undamaged item in its original
packaging (where packaging is ... Read more
Brand: JB INDUSTRIES
Inside Dia.: 0.070" MPN: TC-70-12
Outside Dia.: 0.125" NumberOfItems: 1
Outside Dia. (In.): 0.125 Material: Copper
Connection: .070 ID x .125 OD Package Quantity: 1
Inside Dia. (In.): 0.07 Length (In.): 144
Connection Size: 0.070" ID x 0.125" OD Length: 12 ft.
Description: 12-Ft. Coil For Use With: Refrigeration And Air Conditioning
Systems
UPC: 684520390706
Questions and answers about this item
No questions or answers have been posted about this item.
Ask a question*- opens in a new window or tab*
<http://contact.ebay.com/ws/eBayISAPI.dll?ShowSellerFAQ&iid=222387314720&requested=zorotoo
ls&redirect=0&frm=284&rt=nc&_trksid=p2047675.l1499&ssPageName=PageSellerM2MFAQ_VI>

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JB Weld 8270 New- J-B Professional Siz
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TC Electronic RS212 2x12 400-Watt...
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Glastender 09000527 Capillary Tubing
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$26.56

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<http://www.ebay.com/sch/Durham-Industries-1-12-Dollhouse-Miniatures/1202/bn_5595589/i.html?_trksid=p2047675.m2392>
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<http://www.ebay.com/itm/12-ft-Capillary-Tubing-Jb-Industries-TC-70-12-/222387314720#>

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73 Jordan VE7JJD

11818. Varicaps

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-10 01:50:12 UTC
From: gnuarm.2007@...
Topic: 11818 Message: 11818

I'm looking at building a low frequency VCXO with a variable cap diode to control the frequency. I'm having a hard time finding a source for a 240 or 120 kHz crystal, but sooner or later I'll find a manufacturer who will sample some parts.

I'm looking at the tuning diode. I've found a lot of web pages that talk about using standard diodes or LEDs or the BE junction of BJTs. A couple of them have measured data for the capacitance vs. voltage. For the voltage range I'll have (0 to 3.3v) most barely give you a 2:1 capacitance change. So I looked at some hyperabrupt junction tuning diodes. I can get units with 10:1 capacitance ratio over that voltage range! Digikey has them for under a dollar at qty 1. So why would anyone want to use a poor substitute rather than the "real" thing?

I'm not sure what range of cap I'll need really. I'm not trying to make a widely tunable oscillator. I want to be able to adjust it to stay on frequency as it drifts. So I need enough capacitance to bend the crystal frequency by maybe ±100 ppm or 20 Hz. I'm thinking with a crystal specified for 12.5 pF load capacitance, if I use two diodes, one on each end of the crystal, with a range of 5 to 50 pF, the crystal will see 2.5 to 25 (plus the stray capacitance). Any idea if that will be enough in both directions?

Rick C.

11819. Re: Varicaps

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-10 03:19:01 UTC
From: siliconhillbilly@...
Topic: 11818 Message: 11819

Breadboard the oscillator with a mechanical variable capacitor and measure the results. Go from there.

11820. Re: Varicaps

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-10 12:28:02 UTC
From: bob71741@...
Topic: 11818 Message: 11820

You will have better results pulling/phase locking the xtal at 2 MHz(or so) with the varactor and then dividing the output by 10 or so to get your 240 KHz.

You can also get a xtal with +/- 20 ppm stability with out temp control, if I remember correctly.

11821. Fwd: [regenrx] International Crystal shutting doors

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-12 03:00:13 UTC
From: Jordan Dobrikin
Topic: 11821 Message: 11821

Hi
Time, Progress and Technology marches on.
73 de Jordan ve7jjd

---------- Forwarded message ----------
From: Hubert Miller kargo_cult@... [regenrx] <regenrx@yahoogroups.com>
Date: Sat, Mar 11, 2017 at 6:11 PM
Subject: [regenrx] International Crystal shutting doors
To: "tetrode@...m" <tetrode@...>, Military Surplus
Mail List <milsurplus@mailman.qth.net>, "armyradios@yahoogroups.com" <
armyradios@yahoogroups.com>, "regenrx@yahoogroups.com" <
regenrx@yahoogroups.com>

I am repeating a message i just read on EMRFD group mail.

International Crystal Manufacturing Company is closing.

This company has been in business for a long time, over the years
manufacturing kits, CB radios, and quartz crystals made to order.

As another noted: “End of an era”.

https://www.icmfg.com/

via: H Miller

--
73 Jordan VE7JJD

11822. Faraday Loop for Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-13 04:51:49 UTC
From: hmholden69@...
Topic: 11822 Message: 11822

I'm building a magnetic loop antenna for shortwave reception. I have noticed in all the technical literature related to building the loop, that they say that the smaller feeder loop, usually some flavor of a faraday loop, should be 1/5 the circumference of the main loop. What is the reason for this? Does it have something to do with impedence matching or what.

11823. Re: Faraday Loop for Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-13 05:06:44 UTC
From: gnuarm.2007@...
Topic: 11822 Message: 11823

I believe that is correct, the issue is impedance matching. But there are other ways to adapt the very low impedance of a magnetic loop to a receiver. One I have seen but not yet tried is to use a toroid core for the coupling. A small number of turns on the loop for the feeder and the main loop would pass through the torus once. An old PC power supply could be a good source for an appropriate core, but only for lower frequency signals.

Rick C.

11824. Re: [loopantennas] Re: Faraday Loop for Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-13 06:53:58 UTC
From: Jordan Dobrikin
Topic: 11822 Message: 11824

There are 50 million ways to extract the signal from the big loop to the Receiver not all coils and nothing really to choose between them as they all are about equal. For HF with the loop outdoors I recommend a low noise wide band Preamp or a Preamp with Varactor Tuning Preamp.

I am curious as to the details of the Loop you are building.

http://dl2kq.de/ant/3-96.htm

http://www.ebay.com/itm/Magnetic-Active-HF-Antenna-Kit-PCB-3MHz-30MHz-for-Hula-Loop-Shortwave-Radio-/321928161314

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On Sun, Mar 12, 2017 at 10:06 PM, gnuarm.2007@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> I believe that is correct, the issue is impedance matching. But there are
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> signals.
>
> Rick C.

>
>

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73 Jordan VE7JJD

11825. Re: [loopantennas] Re: Faraday Loop for Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-13 07:00:45 UTC
From: Jordan Dobrikin
Topic: 11822 Message: 11825

Hi
Translation
73 de Jordan ve7jjd

http://dl2kq.de/ant/3-96.htm

нтон Г.
Hello, Jordan.
I translated the part of description this preamp from web-site DL2KQ. This is about you case
---
If this ferrite magnetic resonance antenna or 1 ... 2 Coiled loop, R2 is absent, and tuning are set varicap VD1 -VD4 (I used BB640) and their control circut of the shack: R1, R5, C1, C9. In addition, when working with a ferrite magnetic antenna (MA) is necessary think over the nominal value of R3 and R4. It defines Q factor the antenna circuit (of course, in addition to single Q of the antenna coil). Depending on the inductance, single Q MA and the desired bandwidth (no adjustment) and select ratings R3, R4.

When you use resonance antenna (magnetic loop for example) you need to turn it to different frequencies. That's why you need varicap.
The preamp works great from 0.1 to 10 MHz and works fine from 10 to 28 MHz.

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http://dl2kq.de/ant/3-96.htm dl2kq@...
Power receiving antenna
The differential amplifier for receiving the frame and ferrite antenna.
For receiving loop antennas (such as "flags") requires an amplifier. With the noise and gain no problems. This is easy to do.
But such an antenna because of the small useful signal from the amplifier requires a very high attenuation coefficient of the in-phase component (CMRR CMRR or English from the Common-Mode Rejection Ratio), as otherwise made braided power cable spurious signals completely spoil the work of the antenna (which is often the case and is the source of the opinion that such antennas operate as himself).
The easiest way to implement it, making a differential amplifier with a large CMRR. And the need is power. Structural type of scheme balun + unbalanced power will not give a good result. Even the best such transformers, common mode rejection ratio of 1.8 and 3,6 MHz (and receiving antennas are needed mainly on the low bands) rarely exceeds 40 dB (talk about high impedance transformers). But that is not enough: a typical receiving antenna gain -30 dBi, its ratio F / B another 20 ... 30 dB, then we need a minimum of 50 ... 60 dB attenuation in-phase component.
Differential is such suppression may be amplifiers. But they need to be

integrated. The idea to make difkaskad discrete transistors is divided on almost impossible to find a pair of transistors with an accuracy of 0.3 ... 0.1% (this is the same 50 ... 60 dB suppression, only expressed as a percentage).
Average performance of differential stage op amp provides a suppression, but it has to have the disadvantage that the input impedances of both inputs are obtained by different. From this dish loses its symmetry.
Decision fully satisfies us is the use of a specialized differential amplifier AD8129 . Below 4 MHz it has the CMRR higher than 80 (!) DB and two differential inputs with an equal and very high (> 4 MOhm) impedance.
AD8129 separate advantage is that the differential inputs are used to set the gain, i.e. they do not need to load anything extra.
Schematic of the amplifier circuit is shown in the following figure. Black elements on it are shown mounted in any case, the red - only when the magnetic antenna with the ferrite, green - only when the frame.
The gain (in this case, it is equal to 30) is given by the ratio of voltage R7 / R6 resistors. These resistors have no effect on the input impedance on the working inputs (pins 1 and 8 chips DA1).
Power bipolar chips (note, in the scheme of two different ground). Filters L1-C2-C4 and L2-C3-C5 unleash the power (this is in addition to the CMR).
The mid-point (ground amplifier) defines stabilizer DA2.
Power to the amplifier can be supplied by a common coaxial cable (as shown). For further isolation from the dirt on the outside of the braid mounted decoupling choke T2. He wound LF ferrite core, inductance> 1 mH. RF choke L4 divides the power and output RF signals.
If the power is supplied to the amplifier not coax, and on a separate line, L4 is not necessary, and T2 is two-winding. In this case, both windings T2 are wound in one direction (as in any power throttle) 12 and the voltage + V is applied to the second input through DA2 winding T2.
The output of the amplifier through R8 is connected to the separation of HF transformer T1, a low interturn capacitance and the winding ratio of 1: 1.
This transformer is needed to isolate the common-mode signal between the amplifier ground and the braid of the coaxial drop cable. Resistor R8 coordinates transformer T1 (DA1 at the very low output impedance).
Protective diodes VD7 VD8 (any silicon high) to prevent overloading the receiver (DA1 may issue up to 5 V amplitude, which is not like all receivers). C7 separation.
L3 elements C10 shared shack in the power of the amplifier and the receiver input.
Inductors L3, L4 inductance of 200 uH and above.
But back to the door of the shack amplifier: terminals 1 and 8 DA1. As already mentioned, this high-impedance differential inputs with high (> 80 dB) CMRR. They need to solve three problems:
Snap DC. This is done by resistors R3, R4. Their face value is not very important (in addition to working with a ferrite magnetic antenna, see below.) From 100 k to 1 M. But desperately important that they are identical: they will have to pick up the digital tester with honors no more than 0.1% (preferably less). Otherwise, they skewed input of the amplifier, with a corresponding decrease in AUC.

Protect entrances at the transmitter. Couple VD5 RF diodes, VD6 to deal with it.
Connect the antenna and the necessary elements to it. It depends on which antenna will be used:
If apertodicheskaya frame, such as the "flag", it is connected directly to the inputs. Additionally, the resistor R2 is set with a resistance equal to the input frame (typically a few hundred ohms)
If this ferrite magnetic resonance antenna or 1 ... 2 Coiled frame, R2 is absent, and the restructuring are set varicap VD1 -VD4 (I used BB640) and management of the chain of the shack: R1, R5, C1, C9 . In addition, when working with a ferrite magnetic antenna (MA) is necessary to reflect on the nominal value of R3 and R4. It defines the quality factor of the antenna circuit (of course, in addition to single quality factor of the antenna coil). Depending on the inductance, single Q MA and the desired bandwidth (no adjustment) and select ratings R3, R4.
The following figure shows the spectrum in the band 100 kHz at the output of the amplifier described with denominations R3 R4 390 k and attached ferrite magnetic antenna on the rod with a diameter of 400 μ = 8 mm and 100 mm in length. The range of 160 meters, the antenna is located inside the building, so in addition to the useful signals can be seen more and a lot of noise and the degree of attenuation:
The output level of terrestrial noise resonance MA is - 93 dBm (the vertical scale in the figure in dBm), ie 5 uV, which roughly corresponds to the level of noise with a full-sized antenna. If you need to change the gain, then it is done divider R7 / R6. AD8129 can provide a gain of up to 100 times on the low HF bands.
Of course, for normal reception, the antenna should be brought somewhere far away and higher up on local sources of interference.
Update on 01/14/2015. That review UK8AFV described in the amplifier. There have just above the circuit board.
Beer Sheva, 26.09.2014

On Sun, Mar 12, 2017 at 11:53 PM, Jordan Dobrikin <jjdobrikin@...>
wrote:

> There are 50 million ways to extract the signal from the big loop to the
> Receiver not all coils and nothing really to choose between them as they
> all are about equal. For HF with the loop outdoors I recommend a low noise
> wide band Preamp or a Preamp with Varactor Tuning Preamp.
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> I am curious as to the details of the Loop you are building.
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>> Rick C.
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> 73 Jordan VE7JJD
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73 Jordan VE7JJD

11826. New to Loop antennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-13 12:20:15 UTC
From: gstern48@...
Topic: 11826 Message: 11826

I am new to Loop antennas. I bought Chameleon CHA P-Loop antenna from DX Engineers. On sale for $300. I am not using the antenna for QRP, but as a back up antenna for my bedroom Icom R-75 receiver and maybe for my SDR-PLAY as a panadapter on HF. My wife will not think it's good looking in bedroom. HA HA!

We are in the low Solar Cycle. 20 meters is terrible and 40 is better in the late evening, but I am not getting a good SSB signal on R-75 with Loop antenna in my bedroom. I adjusted the loop tuner adjustment (very easy) to the highest signal strength on R-75 and position the antenna in many directions, but no legible SSB HF signal. I have a BHI DSP speaker to take out white noise. Loop Magnetic antennas are suppose to be much quieter than Dipole and Vertical antennas. Please give me some helpful tips?

Sincerely,
Gene KC4FA

11827. Re: [loopantennas] Re: Faraday Loop for Magnetic Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-13 19:29:48 UTC
From: deridog
Topic: 11822 Message: 11827

The 1/5 is the ratio of the main loop parallel resistance and the cable resistance, typically 50 ohms, power 0.25. The parallel resistance is in the order of tenth of Kohms.
There are several coupling methods, it is a question of taste. My loop is "canonical" 1m diameter copper tubing 16 mm and I don't need preamplifier. I tested coupling loop and threaded toroids with 6 turns on the cable side. The ferrite tested are mix 31 and 47 (very popular). 31 is lossy on low bands (>60m), 47 on high (<17m). Coupling loop perform very close to mix 31.
The following links can help to make a good choice. https://www.nonstopsystems.com/radio/pdf-ant/article-antenna-mag-loop-2.pdf http://www.lz1aq.signacor.com/docs/fa-eng/Weak_signals-mag_loop_engl.htm
A good small loop calculatorhttps://www.google.it/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&ved=0ahUKEwjU3v_DkdTSAhVDjSwKHWt7BMAQFgg-MAQ&url=http%3A%2F%2Fwww.saunalahti.fi%2Fhohtola%2Fham%2Fmagnetic-loop-for-80m%2Floop-calculator.xls&usg=AFQjCNFm_HnABHyMB4IpexXP_TXrWptROQ

Il Lunedì 13 Marzo 2017 6:06, "gnuarm.2007@... [loopantennas]" <loopantennas@yahoogroups.com> ha scritto:

I believe that is correct, the issue is impedance matching. But there are other ways to adapt the very low impedance of a magnetic loop to a receiver. One I have seen but not yet tried is to use a toroid core for the coupling. A small number of turns on the loop for the feeder and the main loop would pass through the torus once. An old PC power supply could be a good source for an appropriate core, but only for lower frequency signals.

Rick C.

11828. Litz wire

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-14 18:56:25 UTC
From: david.sarraf@...
Topic: 11828 Message: 11828

The use of litz wire is a frequent discussion topic in this group. Discussions on litz wire construction are rare. I've uploaded a paper, "Simplified Design Method for Litz Wire", that provides a method for designing litz wire in the context of transformers and inductors for switching power supplies. The value of the paper to this group can be found in equations 1 and 4 and the latter half of section V1, Experimental Measurements. In particular, equation 4 provides a simple way to evaluate the suitability of of a particular litz wire construction based on frequency (skin depth) and strand construction.

Dave Sarraf
N3NDJ

11829. New file uploaded to loopantennas

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-14 18:57:33 UTC
From: loopantennas@yahoogroups.com
Topic: 238 Message: 11829

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the loopantennas
group.

File : /Simplified Design Method for Litz Wire.pdf
Uploaded by : david.sarraf <david.sarraf@...>
Description :

You can access this file at the URL:
https://groups.yahoo.com/neo/groups/loopantennas/files/Simplified%20Design%20Method%20for%20Litz%20Wire.pdf

To learn more about file sharing for your group, please visit:
https://help.yahoo.com/kb/index?page=content&y=PROD_GRPS&locale=en_US&id=SLN15398

Regards,

david.sarraf <david.sarraf@...>

11830. Helpful Tips for New Loop user

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-15 20:05:35 UTC
From: gstern48@...
Topic: 11830 Message: 11830

I just bought a Chameleon CHA-P-LOOP. Not for QRP or transmitting, just to listen on my Icom R-75 receiver in the bedroom. 20 and 40 meters. Any suggestions would be appreciated.

Thank You,
Gene KC4FA

11831. Re: [loopantennas] Helpful Tips for New Loop user

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-15 21:36:31 UTC
From: Jordan Dobrikin
Topic: 11830 Message: 11831

Hi
Get the antenna far away from the ambient noise that plagues today's modern households.
Out doors is best; at a window next best; if you have an attic that minimizes the amount of solids the signals must penetrate.
As Air Conditioning in your car and Remote Control on your TV are no longer a luxury, but a necessity so goes a Rotator; IMHO.

Consider adapting low cost HDTV Antenna/Rotator found on Ebay

http://www.ebay.ca/itm/Outdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF-/391531532369?hash=item5b29191051:g:APUAAOSwaB5XrkZy

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Advanced <http://www.ebay.ca/sch/ebayadvsearch>

- Hi *Jordan*!
<http://www.ebay.ca/itm/Outdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF-/391531532369?hash=item5b29191051:g:APUAAOSwaB5XrkZy#>
- eBay Deals <http://deals.ebay.ca/>
- Sell <http://sell.ebay.ca/sell>
- Help & Contact <https://ocsnext.ebay.ca/ocs/home>
- [image: Let s Sell Something] <http://ebay.to/2mfDhUr>

- Current language EnglishEnglish
- My eBay <http://my.ebay.ca/ws/eBayISAPI.dll?MyEbay&gbh=1>

[image:
Outdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF]
Mouse over image to zoom

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[image:
Outdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF]
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[image:
Outdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF]

Have one to sell? Sell it yourself
<http://cgi5.ebay.ca/ws/eBayISAPI.dll?SellLikeItem&item=391531532369&rt=nc&_trksid=p2047675.l2567>
Outdoor Amplified Digital Clear HDTV HD Rotor TV Antenna Remote 360
Rotation UHF

<http://www.ebay.ca/soc/share?swd=2&du=http%3A%2F%2Fwww.ebay.ca%2Fitm%2FOutdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF-%2F391531532369&rt=nc&t=Outdoor%20Amplified%20Digital%20Clear%20HDTV%20HD%20Rotor%20TV%20Antenna%20Remote%20360%20Rotation%20UHF%20%7C%20eBay&spid=2047675&media=http://i.ebayimg.com/00/s/MTIwMFgxMjAw/z/APUAAOSwaB5XrkZy/$_1.JPG&shorten=0&itm=391531532369>

<http://www.ebay.ca/soc/share?swd=3&du=http%3A%2F%2Fwww.ebay.ca%2Fitm%2FOutdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF-%2F391531532369&rt=nc&t=Look%20what%20I%20found%20on%20%40eBay!&spid=2047675&lang=en&media=http://i.ebayimg.com/00/s/MTIwMFgxMjAw/z/APUAAOSwaB5XrkZy/$_1.JPG&itm=391531532369>

<http://www.ebay.ca/soc/share?swd=11&du=http%3A%2F%2Fwww.ebay.ca%2Fitm%2FOutdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF-%2F391531532369&rt=nc&t=Outdoor%20Amplified%20Digital%20Clear%20HDTV%20HD%20Rotor%20TV%20Antenna%20Remote%20360%20Rotation%20UHF%20%7C%20eBay&spid=2047675&media=http://i.ebayimg.com/00/s/MTIwMFgxMjAw/z/APUAAOSwaB5XrkZy/$_1.JPG&itm=391531532369>
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<http://www.ebay.ca/myb/WatchListAdd?_trksid=p2047675.l1359&SubmitAction.AddToListVI=x&item=391531532369&rt=nc&srt=0100010000005029c0e9983f32e0f18f0eadbb6fb5f35aabefbb4a5f10cd02bb78e48d056398b5307af6ea69cc4081fefaad2a084a5a44ecdaad3bf61079cb58800d5fe38d5f65dd70beab5d467298a0e5f944a0b6fae8&etn=Watch%20list&tagId=-99&wt=0b0aa492360e39f0a32bf304fc32e75c&ssPageName=VIP:watchlink:top:en&sourcePage=4340>
Seller :
sourceplus <http://www.ebay.ca/usr/sourceplus?_trksid=p2047675.l2559> (57614
<http://feedback.ebay.ca/ws/eBayISAPI.dll?ViewFeedback&userid=sourceplus&iid=391531532369&ssPageName=VIP:feedback&ftab=FeedbackAsSeller&rt=nc&_trksid=p2047675.l2560>
) [image: About sourceplus]
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<http://stores.ebay.ca/sourceplus?_trksid=p2047675.l2563>
Item condition:
New
Quantity:
More than 10 available / 64 sold
<http://offer.ebay.ca/ws/eBayISAPI.dll?ViewBidsLogin&item=391531532369&rt=nc&_trksid=p2047675.l2564>
Price:
US $25.99
Approximately C $34.99
Buy It Now
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64 watching
Add to watch list
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More than 67% sold
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No additional import charges at delivery!
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Fast Shipping USA w/ Tracking, United States

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Import charges:
US $0.00 (amount confirmed at checkout)
Delivery:
Estimated within 10-17 business days
Includes *international tracking*
Payments:
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Express] [image:
Discover]
Credit cards processed by PayPal
See payment information
<http://www.ebay.ca/itm/Outdoor-Amplified-Digital-Clear-HDTV-HD-Rotor-TV-Antenna-Remote-360-Rotation-UHF-/391531532369?hash=item5b29191051:g:APUAAOSwaB5XrkZy#payCntId>
International shipping and import charges paid to Pitney Bowes Inc. Learn
More*- opens in a new window or tab*
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Money Back Guarantee | See details*- opens in a new window or tab*
<http://pages.ebay.ca/ebaybuyerprotection/index.html>
Get the item you ordered or get your money back.
Covers your purchase price and original shipping.

-

On Wed, Mar 15, 2017 at 1:05 PM, gstern48@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> I just bought a Chameleon CHA-P-LOOP. Not for QRP or transmitting, just to
> listen on my
>
> Icom R-75 receiver in the bedroom. 20 and 40 meters. Any suggestions would
> be appreciated.
>
>
> Thank You,
>
> Gene KC4FA
>
>
>
>

--
73 Jordan VE7JJD

11832. Magnetic Loop on the Signal Hound Spectrum Analyzer

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-18 18:26:27 UTC
From: alexander.the.hard@...
Topic: 11832 Message: 11832

Magnetic Loop on the Signal Hound Spectrum Analyzer

On Saturday 18 March, COMMSPREPPER published his first video on the Chameleon P-LOOP 2.0. In that video COMMSPREPPER uses the Signal Hound to sweep the Chameleon P-LOOP 2.0 across the 40 meters band. The sweep was quite impressive, showing a very tight bandwidth, indicating a very high Q, as well as a very low and consistent SWR across the band.

https://www.youtube.com/watch?v=0KjcF4LQR08&feature=youtu.be
https://www.youtube.com/watch?v=0KjcF4LQR08&feature=youtu.be

MORE INFO HERE:

http://oh8stn.org/blog/2017/03/18/commsprepper-testing-the-chameleon-p-loop-2-0-with-the-signal-hound/?preview=true http://oh8stn.org/blog/2017/03/18/commsprepper-testing-the-chameleon-p-loop-2-0-with-the-signal-hound/?preview=true

- C

11833. Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-22 04:03:11 UTC
From: bfarina@...
Topic: 11833 Message: 11833

I have a small apartment and I'd like to build an indoor antenna for my SDR. The room that I'd like to install it in is approximately 9x8. What I'm thinking of doing is building a loop or loops of single strand cat-5 wire.

I have a number of questions:

Can I loop the wire, attaching both ends to the center conductor or should I go from center conductor to shield?

Can I create a second loop and attach it to the shield wire, or should I run that wire to ground?

If I run the shield to ground, is it safe to use the ground connector of a 3 prong, 110 wall outlet?

From some of the diagrams that I've seen, it looks like I can 'Y' multiple lengths of wire off the same center conductor (or the female stinger connection) to allow the reception of multiple bands. True?

I realize that some of these questions conflict a bit, but I'm having a little trouble searching for diagrams that specifically relate to my circumstances.

11834. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 02:09:43 UTC
From: vk2tti@...
Topic: 11833 Message: 11834

First thoughts, DO NOT EARTH TO THE POWERPOINT!!!!!!!!!! ,
electrocution is a possability and you will pick up all the noise in
the universe.
                          9x8 feet, metres
or cubits?

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
22 Mar 2017 04:03:11 +0000
Subject:
[loopantennas] Indoor Horizontal Loop Antenna

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my SDR. The room that I'd like to install it in is approximately 9x8.
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circumstances.

Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11833;_ylc=X3oDMTJyYjhrcmJ2BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTgzMwRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0OTA0OTMyNjQ-?act=reply&messageNum=11833
[2]
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[3]
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[4]
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[5]
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[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
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[11]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJnaHNzcnNqBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDkwNDkzMjY0
[12]
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[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11835. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 03:26:36 UTC
From: Bill Farina
Topic: 11833 Message: 11835

That's feet.

From: "vk2tti@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Saturday, March 25, 2017 8:09 PM
Subject: Re: [loopantennas] Indoor Horizontal Loop Antenna

First thoughts, DO NOT EARTH TO THE POWERPOINT!!!!!!!!!! , electrocution is a possability and you will pick up all the noise in the universe.
9x8 feet, metres or cubits?

----- Original Message -----
From: loopantennas@yahoogroups.com
To:<loopantennas@yahoogroups.com>
Cc:
Sent:22 Mar 2017 04:03:11 +0000
Subject:[loopantennas] Indoor Horizontal Loop Antenna

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Email sent using Optus Webmail

11836. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 07:38:03 UTC
From: vk2tti@...
Topic: 11833 Message: 11836

Second thought, Will you tune the loop with a variable capacitor?
Or will
you use the loop/s untuned?
What
female connector is on your SDR, SMA, BNC or SO239?
Do you
use a stand alone SDR or connect it to a laptop or descktop computer?
Regards
Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:

Sent:
Sun, 26 Mar 2017 03:26:36 +0000 (UTC)
Subject:
Re: [loopantennas] Indoor Horizontal Loop Antenna

That's feet.

FROM: "vk2tti@optusnet.com.au [loopantennas]"
<loopantennas@yahoogroups.com>
TO: loopantennas@yahoogroups.com
SENT: Saturday, March 25, 2017 8:09 PM
SUBJECT: Re: [loopantennas] Indoor Horizontal Loop Antenna

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electrocution is a possability and you will pick up all the noise in
the universe.
9x8 feet, metres
or cubits?

----- Original Message -----
From:
loopantennas@...m

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
22 Mar 2017 04:03:11 +0000

Subject:
[loopantennas] Indoor Horizontal Loop Antenna

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Email sent using Optus Webmail

Links:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11835;_ylc=X3oDMTJyaGNlN2NzBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTgzNQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0OTA0OTkwMzg-?act=reply&messageNum=11835
[2]
mailto:bfarina@...?subject=Re%3A%20%5Bloopantennas%5D%20Indoor%20Horizontal%20Loop%20Antenna
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Indoor%20Horizontal%20Loop%20Antenna
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmOHVtcmZqBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0OTA0OTkwMzg-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11833;_ylc=X3oDMTM3dGk5ZTRkBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTgzNQRzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0OTA0OTkwMzgEdHBjSWQDMTE4MzM-
[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links

[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmN3Z0aTNpBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0OTA0OTkwMzg-
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[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11837. Re: Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 10:58:53 UTC
From: deridog@...
Topic: 11833 Message: 11837

Power grid earth is usually a source of RFI.
There are many ways to couple the loop to the coax.
I understand your loop is indoor and receiving only, so the best choice is a preamplifier with hi input impedance. There are many schemes on the web.
The coupling loop is wide band, but not efficient as the preamp. Usually it is 1/5 diameter of the main loop. Another method is passing the antenna loop through a ferrite ring The secondary side of the transformer is then formed by several turns of insulated or enameled wire.

11838. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 16:19:24 UTC
From: Bill Farina
Topic: 11833 Message: 11838

Second thought, Will you tune the loop with a variable capacitor? No
Or will you use the loop/s untuned? Yes
What female connector is on your SDR, SMA, BNC or SO239? SMA
Do you use a stand alone SDR or connect it to a laptop or descktop computer? Connected to desktop.
Regards Max vk2tti.

----- Original Message -----
From: loopantennas@yahoogroups.com
To:"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:
Sent:Sun, 26 Mar 2017 03:26:36 +0000 (UTC)
Subject:Re: [loopantennas] Indoor Horizontal Loop Antenna

That's feet.

From: "vk2tti@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Saturday, March 25, 2017 8:09 PM
Subject: Re: [loopantennas] Indoor Horizontal Loop Antenna

First thoughts, DO NOT EARTH TO THE POWERPOINT!!!!!!!!!! , electrocution is a possability and you will pick up all the noise in the universe.
9x8 feet, metres or cubits?

----- Original Message -----
From: loopantennas@yahoogroups.com
To:<loopantennas@yahoogroups.com>
Cc:
Sent:22 Mar 2017 04:03:11 +0000
Subject:[loopantennas] Indoor Horizontal Loop Antenna

I have a small apartment and I'd like to build an indoor antenna for my SDR. The room that I'd like to install it in is approximately 9x8. What I'm thinking of doing is building a loop or loops of single strand cat-5 wire.

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Email sent using Optus Webmail

11839. RE: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 17:58:20 UTC
From: david
Topic: 11833 Message: 11839

Hi,

You are going to pick up an awful lot of noise from any indoor antenna, but you might have no other choice.
Do an on-line search for "carpet loop antenna". There was an article by David Moisan N1KGH that gave wiring diagrams and everything else you could ask for. It was written back in 2003, and his loop went under the floor-coverings, but all the principles are the same.

Try the basic loop, first, and let us know how you get on.

Best Wishes
David, GM8XBZ

-----Original Message-----
From: loopantennas@yahoogroups.com [mailto:loopantennas@yahoogroups.com]
Sent: 22 March 2017 04:03
To: loopantennas@yahoogroups.com
Subject: [loopantennas] Indoor Horizontal Loop Antenna

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Posted by: bfarina@...

11840. Re: Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 08:03:48 UTC
From: bombnumber21@...
Topic: 11833 Message: 11840

Third point: Loops are balanced antennas - they don't need to be earthed.

(Unless they're shielded loops - in which case the shield should ideally be earthed at the antenna, but in practice 90% of the time they end up earthed at the receiver end.)

And yeah, the mains earth is not RF earth.

11841. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-26 23:46:02 UTC
From: Jordan Dobrikin
Topic: 11833 Message: 11841

Hi

toddemslie@... [ultralightdx] <ultralightdx@yahoogroups.com>
3:05 PM (1 hour ago)
to ultralightdx

Yes Chuck, Gordon Nelson's 4' NRC loop featured very high tuning Q, although it also included a specially constructed amplifier to isolate the main tank coil. The electronics is the reason why the 4' NRC loop was so selective. Take away the isolation amp, in terms of selectivity, it is just a garden variety 4' loop. The tilting feature was useful for nulling local signals.
A high Q FSL portable antenna can be used to slope detect DX by peaking the loop's response to one side of an unwanted strong domestic signal. One example is trying to receive 567 KHz Wellington, New Zealand adjacent to local 50 kW 576 KHz ABC Sydney. By tuning a high Q loop to approximately 560 KHz, the signal from 576 KHz is reduced, hence less adjacent channel splash to 567 KHz. This is especially useful at the low of the MW band.

Certain variations of Litz wire feature lower resistance, hence higher Q. Although the trade-off is somewhat muffled audio response at the low end of the band. To partly get around this, slope detection tuning offset slightly away from the wanted DX signal is beneficial as outlined above. A possible analog to this is the IF passband tuning control on the Drake receivers.

Todd _._,_.___

Posted by: toddemslie@...

On Sun, Mar 26, 2017 at 10:58 AM, 'david' zinc65@...
[loopantennas] <loopantennas@yahoogroups.com> wrote:

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>
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> Try the basic loop, first, and let us know how you get on.
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> Best Wishes

> David, GM8XBZ
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> From: loopantennas@yahoogroups.com [mailto:loopantennas@...m]
> Sent: 22 March 2017 04:03
> To: loopantennas@yahoogroups.com
> Subject: [loopantennas] Indoor Horizontal Loop Antenna
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> _____
>
> Posted by: bfarina@...
> _____
>
>
>

--
73 Jordan VE7JJD

11842. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-27 03:20:32 UTC
From: vk2tti@...
Topic: 11833 Message: 11842

G'day Bill F, Sounds like you are having The Mother of all Battles with Noise so you are looking at a Faraday Shielded Loop where one end of the shield goes nowhere but the cable is bent round into a loop and its centre conductor is connected to the shield near the SMA connector end at the radio.
It will be hard to join this all to an SMA Plug, it's so small. Perhaps a BNC plug would be easier to work with and use an BNC female / SMA male connector. I am not familiar with Cat5 cables, presumeably it has a centre conductor and a braided shield.
Get a male BNC RG58 crimp connector, prepare one end of the cable by soldering the centre conductor to the pin of the BNC connector and bare the shield and work the pin and shield into their proper place.
Go to the other end of the cable slipping the crimp sleeve over the cable end and down to the BNC connector, DO NOT CRIMP YET.
Go back to the end opposite the BNC connector, trim that end so you have about 3/8 inch of centre conductor sticking out, trim back the braid about 1/8 inches so it cannot connect to anything now or later.
Bring the end with the bared conductor around to the BNC end.
Push the bared conductor in amongst the strands of the braid under the crimp ring and crimp that ring, braid and conductor together to the back of the BNC male.
You now have a Farady Shielded Loop with a BNC connector at one end and the centre connector only of the other end earthed at the BNC end.

I have found much noise rides on the ac mains. I use a powerline filter between the wall outlet and my electronic gear with some success.

There is no magic bullet for the noise problem, all one can do is nibble away at the problem bit by bit.

Regards Max vk2tti

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loopantennas@yahoogroups.com

To:
"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:

Sent:
Sun, 26 Mar 2017 16:19:24 +0000 (UTC)
Subject:
Re: [loopantennas] Indoor Horizontal Loop Antenna

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CONNECTED TO DESKTOP.
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[2]
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[5]
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[6] https://yho.com/1wwmgg
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[9] http://ph.groups.yahoo.com/group/loopantennas/photos
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[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
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[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11843. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-27 03:43:06 UTC
From: Will Kimber
Topic: 11833 Message: 11843

Cat5 is basically telephone cable. O.K its actually ethernet 100MHz twin twisted pair and this is solid not stranded conductors. Not shielded.

I'm having trouble understanding what the OP really wants to do. A large loop like this normally needs a tuner to make transition to co-ax that would go to SDR.

He could connect one end of loop (all conductors shorted together and connect that to center of co-ax. That is a random long wire a/e. He could make it into a loop by joining other end of loop to co-ax shield and take his luck on its resonant frequency.

Cheers,

Will

On 03/27/2017 04:20 PM, vk2tti@... [loopantennas] wrote:
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> with Noise so you are looking at a Faraday Shielded Loop where one end
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11844. Re: [loopantennas] Indoor Horizontal Loop Antenna

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-27 07:35:46 UTC
From: vk2tti@...
Topic: 11833 Message: 11844

Thanks Will, I though cat5 was twisted pair but I am usually wrong, could be shielded cat5 is available, it's a big world out there. I also was not sure that I understood Bill F. thats why all the questions. He certainly will have a noise problem at his QTH. I don't think cat5 will be a solution. However a single strand of cat5 wire one end to the pin of the SMA connector and the other end to the shell of the SMA connector would form a large horizontal omnidirectional unshielded loop. Not immune to noise. Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
<loopantennas@yahoogroups.com>
Cc:

Sent:
Mon, 27 Mar 2017 16:43:06 +1300
Subject:
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Go to the other end of the cable slipping the crimp sleeve over the cable end and down to the BNC connector, DO NOT CRIMP YET.
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I have found much noise rides on the ac mains. I use a powerline filter between the wall outlet and my electronic gear with some success.

There is no magic bullet for the noise problem, all one can do is nibble away at the problem bit by bit.

Regards Max vk2tti

----- Original Message -----
From:
loopantennas@yahoogroups.com [2]

To:
"loopantennas@yahoogroups.com" [3] <loopantennas@yahoogroups.com> [4]
Cc:

Sent:
Sun, 26 Mar 2017 16:19:24 +0000 (UTC)
Subject:
Re: [loopantennas] Indoor Horizontal Loop Antenna

Second thought, Will you tune the loop with a variable capacitor? NO
Or will you use the loop/s untuned? YES
What female connector is on your SDR, SMA, BNC or SO239? SMA
Do you use a stand alone SDR or connect it to a laptop or descktop computer? CONNECTED TO DESKTOP.
Regards

Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com [5]

To:
"loopantennas@yahoogroups.com" [6] <loopantennas@yahoogroups.com> [7]
Cc:

Sent:
Sun, 26 Mar 2017 03:26:36 +0000 (UTC)
Subject:
Re: [loopantennas] Indoor Horizontal Loop Antenna

That's feet.

FROM: "vk2tti@... [loopantennas]" [8]
<loopantennas@yahoogroups.com> [9]
TO: loopantennas@yahoogroups.com [10]
SENT: Saturday, March 25, 2017 8:09 PM
SUBJECT: Re: [loopantennas] Indoor Horizontal Loop Antenna

First thoughts, DO NOT EARTH TO THE POWERPOINT!!!!!!!!!! ,
electrocution is a possability and you will pick up all the noise in
the universe.
9x8 feet, metres
or cubits?

----- Original Message -----
From:
loopantennas@yahoogroups.com [11]

To:
<loopantennas@yahoogroups.com> [12]
Cc:

Sent:
22 Mar 2017 04:03:11 +0000
Subject:
[loopantennas] Indoor Horizontal Loop Antenna

I have a small apartment and I'd like to build an indoor antenna
for my SDR. The room that I'd like to install it in is approximately
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strand cat-5 wire.

I have a number of questions:

Can I loop the wire, attaching both ends to the center conductor or
should I go from center conductor to shield?

Can I create a second loop and attach it to the shield wire, or should I run that wire to ground?

If I run the shield to ground, is it safe to use the ground connector of a 3 prong, 110 wall outlet?

From some of the diagrams that I've seen, it looks like I can 'Y' multiple lengths of wire off the same center conductor (or the female stinger connection) to allow the reception of multiple bands. True?

I realize that some of these questions conflict a bit, but I'm having a little trouble searching for diagrams that specifically relate to my circumstances.

Email sent using Optus Webmail

Email sent using Optus Webmail

Links:
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[1] mailto:vk2tti@...
[2] mailto:loopantennas@...m
[3] mailto:loopantennas@yahoogroups.com
[4] mailto:loopantennas@yahoogroups.com
[5] mailto:loopantennas@yahoogroups.com
[6] mailto:loopantennas@yahoogroups.com
[7] mailto:loopantennas@yahoogroups.com
[8] mailto:vk2tti@optusnet.com.au%5Bloopantennas%5D
[9] mailto:loopantennas@yahoogroups.com
[10] mailto:loopantennas@yahoogroups.com
[11] mailto:loopantennas@yahoogroups.com
[12] mailto:loopantennas@yahoogroups.com
[13]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11843;_ylc=X3oDMTJyNHJiMXFmBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTg0MwRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0OTA1ODYxOTM-?act=reply&messageNum=11843
[14]
mailto:zl1tao@...?subject=Re%3A%20%5Bloopantennas%5D%20Indoor%20Horizontal%20Loop%20Antenna
[15]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Indoor%20Horizontal%20Loop%20Antenna
[16]
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[17]
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[18] https://yho.com/1wwmgg

[19] http://groups.yahoo.com/group/loopantennas/links
[20] http://groups.yahoo.com/group/loopantennas/files
[21] http://ph.groups.yahoo.com/group/loopantennas/photos
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[24]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlbjF0NzJjBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ5MDU4NjE5Mw--
[25] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[26]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[27] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11845. Indoor Horizontal Loop Antenna - Results So Far

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-27 19:58:49 UTC
From: Bill Farina
Topic: 11833 Message: 11845

Everyone,
Thank you for all the input, It's been extremely helpful.
What I have done so far is take a single strand from a Cat5 cable. Cat5 is low bandwidth computer network cable. It has 8 single strands or 4pr wound inside a plastic shield. I have a ton of scraps laying around since I do network infrastructure for a living. What I did is take one of those strands and looped it around the inside of a room using about 35'. I connected one end to the center conductor of a short SMA jumper and connected the other end to the shield of that same jumper.
I originally had a short telescoping antenna attached to the back of the radio. I live in a valley in the mountains and this gave me some reception for local business and govt transmissions.
My intention is to try to receive some shortwave signals.

Currently the noise level that I'm getting is fairly low. It's comparable to the telescoping antenna. I just completed hooking everything up and I'm starting to scan the bands to see what I can pick up that I wasn't able to pick up originally. I'm not sure how much effort I want to put into this antenna because I'm probably only here for the next 6 months. Planning to bounce down to the Florida coast in the near future.

Cheers,
BillKE0WPF

From: "vk2tti@optusnet.com.au [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Sunday, March 26, 2017 9:20 PM
Subject: Re: [loopantennas] Indoor Horizontal Loop Antenna

G'day Bill F, Sounds like you are having The Mother of all Battles with Noise so you are looking at a Faraday Shielded Loop where one end of the shield goes nowhere but the cable is bent round into a loop and its centre conductor is connected to the shield near the SMA connector end at the radio.
It will be hard to join this all to an SMA Plug, it's so small. Perhaps a BNC plug would be easier to work with and use an BNC female / SMA male connector. I am not familiar with Cat5 cables, presumeably it has a centre conductor and a braided shield.
Get a male BNC RG58 crimp connector, prepare one end of the cable by soldering the centre conductor to the pin of the BNC connector and bare the shield and work the pin and shield into their proper place.
Go to the other end of the cable slipping the crimp sleeve over the cable end and down to the BNC connector, DO NOT CRIMP YET.
Go back to the end opposite the BNC connector, trim that end so you have about 3/8 inch of centre conductor sticking out, trim back the braid about 1/8 inches so it cannot connect to anything now or later.
Bring the end with the bared conductor around to the BNC end.
Push the bared conductor in amongst the strands of the braid under the crimp ring and crimp that ring, braid and conductor together to the back of the BNC male.
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I have found much noise rides on the ac mains. I use a powerline filter between the wall outlet and my electronic gear with some success.

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Regards Max vk2tti

----- Original Message -----
From: loopantennas@yahoogroups.com
To:"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:
Sent:Sun, 26 Mar 2017 16:19:24 +0000 (UTC)
Subject:Re: [loopantennas] Indoor Horizontal Loop Antenna

Second thought, Will you tune the loop with a variable capacitor? No
Or will you use the loop/s untuned? Yes
What female connector is on your SDR, SMA, BNC or SO239? SMA
Do you use a stand alone SDR or connect it to a laptop or descktop computer? Connected to desktop.
Regards Max vk2tti.

----- Original Message -----
From: loopantennas@yahoogroups.com
To:"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:
Sent:Sun, 26 Mar 2017 03:26:36 +0000 (UTC)
Subject:Re: [loopantennas] Indoor Horizontal Loop Antenna

That's feet.

From: "vk2tti@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Saturday, March 25, 2017 8:09 PM
Subject: Re: [loopantennas] Indoor Horizontal Loop Antenna

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----- Original Message -----
From: loopantennas@yahoogroups.com
To:<loopantennas@yahoogroups.com>
Cc:
Sent:22 Mar 2017 04:03:11 +0000
Subject:[loopantennas] Indoor Horizontal Loop Antenna

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Email sent using Optus Webmail

11846. Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-28 02:27:52 UTC
From: vk2tti@...
Topic: 11833 Message: 11846

Greetings Bill F., Am glad we have been helpful. Sounds like you move around a bit. Might I suggest the longest ferrite rod, or short rods butted together with glue, and wound with a length single cat5 wire. Small, portable used tuned (series tuned) or untuned (with a preselector). The top of a local mountain using the SDR and laptop might be a productive day out. Enjoy, best wishes, Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:

Sent:
Mon, 27 Mar 2017 19:58:49 +0000 (UTC)
Subject:
[loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Everyone,

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Cheers,

Bill

KE0WPF

FROM: "vk2tti@optusnet.com.au [loopantennas]"
<loopantennas@yahoogroups.com>
TO: loopantennas@yahoogroups.com
SENT: Sunday, March 26, 2017 9:20 PM
SUBJECT: Re: [loopantennas] Indoor Horizontal Loop Antenna

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----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:

Sent:
Sun, 26 Mar 2017 16:19:24 +0000 (UTC)
Subject:
Re: [loopantennas] Indoor Horizontal Loop Antenna

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CONNECTED TO DESKTOP.
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Max vk2tti.

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From:
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[1]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/messages/11845;_ylc=X3oDMTJyY282c3I4BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTg0NQRzZWMDZnRyBHNsawNycGx5BHN0aW1lAzE0OTA2NDQ5NzE-?act=reply&messageNum=11845
[2]
mailto:bfarina@yahoo.com?subject=Re%3A%20Indoor%20Horizontal%20Loop%20Antenna%20-%20Results%20So%20Far
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[5]
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[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files

[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
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[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11847. Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-28 03:56:22 UTC
From: Andy
Topic: 11833 Message: 11847

Not that it matters for reception -- but you could have used the complete CAT5 cable, with all strands paralleled. One-eighth the resistance, one-eighth the IR loss. For receiving, it might not matter enough to be noticed, but for transmitting it would.

Loops work best when balanced. neither wire going to earth ground. That tends to make them less sensitive to noise pickup.

Andy

11848. Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-28 04:14:09 UTC
From: Bill Farina
Topic: 11833 Message: 11848

>Loops work best when balanced. neither wire going to earth ground.
>That tends to make them less sensitive to noise pickup.
So you're saying that I should join the two ends at the center conductor and attach nothing to the shield of the SMA?
Bill

From: "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Monday, March 27, 2017 9:57 PM
Subject: Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

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Andy

11849. Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-28 09:13:56 UTC
From: vk2tti@...
Topic: 11833 Message: 11849

Bill, You can attach a loop antenna to your SDR and a laptop running on its battery. One end of the untuned loop wire going to the centre pin of the SMA and the other end of the wire to the "earthy" , "shield" side of the SMA connector. NOTHING IN THIS SETUP IS CONNECTED TO THE DIRT OF THE EARTH. It will still work as normal. A mobile phone is just a radio, you hold it in your hand 5 feet above the earth and it still works, there seems to some confusion beatween the types of earths, dirt, RF earths and earths for electric mains safety. A loop and a dipole work in outer space, nowhere near the earth. You are receiving advice in dribs and drabs confusing the issue. Foresake the internet, get a basic book on loop antennas such as ones by Joe Carr and carry on from there. Regards Max vk2tti.

----- Original Message -----
From:
loopantennas@yahoogroups.com

To:
"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:

Sent:
Tue, 28 Mar 2017 04:14:09 +0000 (UTC)
Subject:
Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

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[2]
mailto:bfarina@...?subject=Re%3A%20%5Bloopantennas%5D%20Indoor%20Horizontal%20Loop%20Antenna%20-%20Results%20So%20Far
[3]
mailto:loopantennas@yahoogroups.com?subject=Re%3A%20%5Bloopantennas%5D%20Indoor%20Horizontal%20Loop%20Antenna%20-%20Results%20So%20Far
[4]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/newtopic;_ylc=X3oDMTJmcGJscHU1BF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNudHBjBHN0aW1lAzE0OTA2NzUyNTc-
[5]
https://groups.yahoo.com/neo/groups/loopantennas/conversations/topics/11833;_ylc=X3oDMTM3dGhya2kwBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRtc2dJZAMxMTg0OARzZWMDZnRyBHNsawN2dHBjBHN0aW1lAzE0OTA2NzUyNTcEdHBjSWQDMTE4MzM-
[6] https://yho.com/1wwmgg
[7] http://groups.yahoo.com/group/loopantennas/links
[8] http://groups.yahoo.com/group/loopantennas/files
[9] http://ph.groups.yahoo.com/group/loopantennas/photos
[10]
https://groups.yahoo.com/neo/groups/loopantennas/info;_ylc=X3oDMTJmdXFwNmUwBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2Z2hwBHN0aW1lAzE0OTA2NzUyNTc-
[11]
https://groups.yahoo.com/neo/groups/loopantennas/members/all;_ylc=X3oDMTJndTE2c2gyBF9TAzk3MzU5NzE0BGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDdnRsBHNsawN2bWJycwRzdGltZQMxNDkwNjc1MjU3
[12]
https://groups.yahoo.com/neo;_ylc=X3oDMTJlNnQyNmJsBF9TAzk3NDc2NTkwBGdycElkAzEyODUxOTEwBGdycHNwSWQDMTcwODM5NjM3OQRzZWMDZnRyBHNsawNnZnAEc3RpbWUDMTQ5MDY3NTI1Nw--
[13] https://info.yahoo.com/privacy/us/yahoo/groups/details.html
[14]
mailto:loopantennas-unsubscribe@yahoogroups.com?subject=Unsubscribe
[15] https://info.yahoo.com/legal/us/yahoo/utos/terms/

11850. Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-28 22:14:32 UTC
From: Bill Farina
Topic: 11833 Message: 11850

Max,Good, that's the way I have it now.Bill

From: "vk2tti@optusnet.com.au [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Tuesday, March 28, 2017 3:14 AM
Subject: Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Bill, You can attach a loop antenna to your SDR and a laptop running on its battery. One end of the untuned loop wire going to the centre pin of the SMA and the other end of the wire to the "earthy" , "shield" side of the SMA connector. NOTHING IN THIS SETUP IS CONNECTED TO THE DIRT OF THE EARTH. It will still work as normal. A mobile phone is just a radio, you hold it in your hand 5 feet above the earth and it still works, there seems to some confusion beatween the types of earths, dirt, RF earths and earths for electric mains safety. A loop and a dipole work in outer space, nowhere near the earth. You are receiving advice in dribs and drabs confusing the issue. Foresake the internet, get a basic book on loop antennas such as ones by Joe Carr and carry on from there. Regards Max vk2tti.

----- Original Message -----
From: loopantennas@yahoogroups.com
To:"loopantennas@yahoogroups.com" <loopantennas@yahoogroups.com>
Cc:
Sent:Tue, 28 Mar 2017 04:14:09 +0000 (UTC)
Subject:Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

>Loops work best when balanced. neither wire going to earth ground.
>That tends to make them less sensitive to noise pickup.
So you're saying that I should join the two ends at the center conductor and attach nothing to the shield of the SMA?
Bill

From: "Andy ai.egrps@... [loopantennas]" <loopantennas@yahoogroups.com>
To: loopantennas@yahoogroups.com
Sent: Monday, March 27, 2017 9:57 PM
Subject: Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Not that it matters for reception -- but you could have used the complete CAT5 cable, with all strands paralleled. One-eighth the resistance, one-eighth the IR loss. For receiving, it might not matter enough to be noticed, but for transmitting it would.
Loops work best when balanced. neither wire going to earth ground. That tends to make them less sensitive to noise pickup.
Andy

Email sent using Optus Webmail

11851. Re: [loopantennas] Indoor Horizontal Loop Antenna - Results So Far

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-03-29 06:44:41 UTC
From: Andy
Topic: 11833 Message: 11851

>
> So you're saying that I should join the two ends at the center conductor
> and attach nothing to the shield of the SMA?
>

No. Because then you wouldn't have a loop! You would have a wad of wire attached to the center conductor.

The loop has two terminals. The feedline has two terminals. They need to connect together like that, terminal-to-terminal, in order to work.

Ideally, the loop antenna system would be balanced, not unbalanced (one side "grounded"). You might achieve that by using a "balun" between the unbalanced coax and the (otherwise) balanced loop.

I don't want to imply that you have to actually do this. It may be that everything is good enough without doing that. But ideally, it would make your loop antenna balanced, and then it would reject common-mode noise. Most local electrical noise sources induce common-mode voltages onto the antenna. If those kinds of noise sources are not seriously affecting your antenna, then going to the effort of adding a balun, might not help much.

The balun would also remove the feedline coax as "part of the antenna system." Without it, both the loop and the coax are picking up radio signals, and to some degree they both add to become what goes into your radio. That might be thought of as good, but it's actually undesirable because the coax feedline might run close to equipment and power wires, and might pick up more noise which the loop antenna itself is not receiving.

It can be messy trying to figure out where all the signals go, so most of us don't try.

I guess I'm saying that there are further steps that MIGHT make things better, or they might not really help, and you can't always tell unless you try. If you are satisfied with the results now, then there's little need to "improve" it.

Andy

11852. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-01 06:33:38 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11852

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11853. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-01 06:33:38 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11853

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11856. Re: [loopantennas] Re: MTM Scientific MW loop

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-02 03:27:10 UTC
From: Steve Ratzlaff
Topic: 5136 Message: 11856

Interesting that MTM appears to have discontinued the MW loop that Paul mentions, though links to old ads for it are still at the bottom of the page, though with "sorry, not available" all through the ads. Since it was an approx. 17 inch square loop, it certainly had a lot more capture area than the other commercial small tuned loops. And the review by radiojayallen is always worth reading.

73,

Steve

On 4/1/2017 7:05 PM, tenorman1952@... [loopantennas] wrote:
>
> I have a MTM Scientific kit built AM Loop, and there is a picture of
> my Loop on the
> customer's page at the MTM site.
>
> Recently I bought an older Grundig AN-200 AM loop. This same antenna
> is sold
> as the Eton-Grundig AN-200, Kaito AN-200, and Tecsun AN-200.
>
> I also have one with the Tecsun label.
>
> (There is a similar look sold as the AN-100 by a number of companies,
> same loop,
> different base.)
>
> The AN-200, under whatever label, performs well. Not quite as good as
> the much
> larger MTM Scientific, but very close. With the price and no
> construction, it is a
> good buy. And the black plastic base looks good stacked on top of
> black stereo
> gear.
>
> And the price is certainly right... under $30 USD.
>

11857. Magnetic Loop antenna, man-portable , from my skipulk, here at 65° North

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-05 13:02:09 UTC
From: alexander.the.hard@...
Topic: 11857 Message: 11857

This is a short video showing how simple it is to setup and deploy the Chameleon P-LOOP 2.0 Magnetic Loop antenna, man-portable, from my skipulk, here at 65° North

https://www.youtube.com/watch?v=vP2jHFdvdXg&t
https://www.youtube.com/watch?v=vP2jHFdvdXg&t

11858. Fwd: [ptsw] Radio Free Whatever

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-08 07:10:13 UTC
From: Jordan Dobrikin
Topic: 11858 Message: 11858

FYI
---------- Forwarded message ----------

From: Scott Nelson kg0gd@yahoo.com [primetimeshortwave] <
primetimeshortwave@yahoogroups.com>
Date: Fri, Apr 7, 2017 at 6:14 PM
Subject: [ptsw] Radio Free Whatever
To: "primetimeshortwave@yahoogroups.com" <primetimeshortwave@yahoogroups.com
>

Started listening to Radio Free Whatever at 0100UTC on 6950USB. DJ with
horrible fake Soviet accent reading listener comments and playing music
requests. Also hilarious fake ad for Home Depot.

~ Scott Nelson
KG0GD

--
73 deJordan VE7JJD

11859. Condensed version of a 2010 Modification

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-08 20:03:29 UTC
From: Jordan Dobrikin
Topic: 11859 Message: 11859

Hi
FYI
73 de Jordan VE7JJD

11860. Re: [loopantennas] Condensed version of a 2010 Modification

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-08 20:09:58 UTC
From: blumu
Topic: 11859 Message: 11860

Subject: [icf2010] Condensed version of a 2010 Modification

Date: Sat, 8 Apr 2017 13:03:29 -0700

Hi
FYI
73 de Jordan VE7JJD
.....

Extremely condensed indeed - nothing visible :-)

MichaelUK

11862. Re: [loopantennas] Condensed version of a 2010 Modification

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-04-08 21:47:47 UTC
From: Don Sanders
Topic: 11859 Message: 11862

Must be a Stealth Loop

Dr. Don W4BWS

On Sat, Apr 8, 2017 at 4:09 PM, blumu blumu@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Subject: [icf2010] Condensed version of a 2010 Modification
>
> Date: Sat, 8 Apr 2017 13:03:29 -0700
>
> Hi
> FYI
> 73 de Jordan VE7JJD
> .....
>
> Extremely condensed indeed - nothing visible :-)
>
> MichaelUK
>
>
>

11869. File - Links.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-01 06:17:55 UTC
From: loopantennas@yahoogroups.com
Topic: 5136 Message: 11869

Active AM Antenna With Twin Coil Ferrite by C. Crane Co.
http://www.ccrane.com/antennas/am-antennas/

JLKolb?s antenna links including the KRS AA-1 Active Antenna schematic, antenna preamplfiers, center-tapped loops, and a dual gate FET preselector.
http://jlkolb.cts.com/site/ant.htm

Directional Terminated MW/LW Loop by WellBroook (UK)
K9AY is the Remote Controlled Variable Termination; Provides a Cardioid Reception Pattern with up to 30dB Gain Front-to-Back; Uses Two Delta Loops.
http://www.wellbrook.uk.com/K9AY.html

Kiwa - High Performance MW Air-Core Loop Antenna
High Performance MW Air-Core Loop Antenna by KIWA
http://www.kiwa.com/kiwaloop.html

Palomar Engineers Loop Antennas LW-MW-SW2
Palomar's Loop Antenna gives superb performance on the AM medium-wave broadcast band. The loop rotates and tilts to give deep nulls so you can eliminate local interference. It also allows you to null out a station and listen to another one on the same frequency.
http://www.palomar-engineers.com/Loop_Antenna/loop_antenna.html

The Quantum loop antennas, now V2.0
http://www.dxtools.com/

Terk AM loop at Amazon.com
Here is a place you can buy yourself a TERK AM loop antenna, even some other stuff that is kind of off topic to talk about. 73
http://www.amazon.com/exec/obidos/ASIN/B000069EUW/qid=1075080062/sr=2-1/ref=sr_2_1/102-8712984-4397719

WL1030 by the late Maartenhagg. Plans placed on this website by his friends in his honor.
http://wl1030.com/content/

C Crane Company
They sell the Justice AM Loop Antenna, Select A Tenna, Terk AM 1000
http://www.ccrane.com

Kiwa Electronics
Kwia makes the best products for you and your radio equipment, and also improves things that needed improvement a long time ago.
http://www.kiwa.com

Stormwise Ferrite Rods
Get some huge ferrite rods and a converter to go along with its, heck it even comes with project book.
http://www.stormwise.com

Universal Radio Company
They sell all sorts of loops big and small for LW/MW/SW and VLF also 10 kHz to 15 MHz
http://www.rffun.com

ALA-1530
Find the best UK LF/MF antenna here.
http://www.wellbrook.uk.com/

AOR
This is the site that sells the AOR loop
http://www.aorja.com/ant-e.html

Kiwa Electronics
The maker of the air core loop antenna and other useful items that you may want on your wish list.
http://www.kiwa.com

LF Engineering Company
A group of engineers, who make products for VLF/LF listening even ELF loops!
http://www.lfengineering.com

Select A Tenna by Intensitronics Corp
The maker of the select A tenna, a great AM loop antenna that is a little bigger than the terk
discontinued

Terk Technolegies
The maker of the best sold AM and I use also called the AM-1000 AM loop antenna, there is also technical information on how it works.
http://www.terk.com

Torus Tuner Loop Company
A very specially made loop that is almost as big as a hula hoop
discontinued

GRAHN (Germany) Specialized Loop Antennas for MW and SW Reception Contributed by radiohighfreq
Grahn offers both Ferrite Rod Antennas and Shielded Loop Antennas. Translated from the Gremany Language Webpages here is the "Grahn Specialized Loop Antennas for MW and SW Reception" ULR Address: http://www.grahn-spezialantennen.de/
Use the Google Translate a web Page Tool http://www.google.com/language_tools to convert these webpages to English.
http://makeashorterlink.com/?Z5F025FE4

When considering AM Loop Antennas . . .
- - - It all comes down to Time? & Money?

How much Time? Are you going to be 'using' the Loop Antenna for DXing or simply for "Better" AM Radio Reception (Sports/Talk Radio Loop).

How Much Money? Are you willing to spend for a Loop Antenna to get the kind of better reception you want.

TBL: Time and Money translates to the AM Loop Antenna's Value to You.

The average radio listener (97%), who wants better AM Radio Reception, can spend $100 or less and get an AM Loop Antenna that meets their needs.

Here is a brief list of the more common AM Loop Antennas for $100 or less.

* Twin Coil Ferrite AM Loop Antenna (Active)
- - - http://www.ccrane.com/antennas/am-antennas/

* Torus Tuner 27" Loop Antenna (Passive)
- - - discontinued

* Select-A-Tenna Model #541M (Passive)
- - - discontinued

* Terk AM Advantage Loop Antenna (Passive)
- - - http://www.terk.com/pdfs/Advantage.pdf

* RadioShack AM Loop Antanna # 15-1853 (Passive)
- - - Discontinued (Find 'used' on eBay)

* MTM Scientific AM Radio Loop Antenna (Passive)
* http://www.mtmscientific.com/loop.html
- - - Starter Kit, Deluxe Kit or Finished Antenna!

* * * Home made 'Box' AM Loop Antennas
- Usually 20" to 24" in size
- - Generally a simple Passive antenna
- - - Can be made Active with an add-on amplifier

#1. * Justice AM Loop Antenna (Active)
> - - - discontinued
>

#2. * Torus Tuner 27" Loop Antenna (Passive)
> - - - website gone
>

#3. * Select-A-Tenna Model #541M (Passive)
> - - - website gone
>

#4. * Terk AM Advantage Loop Antenna (Passive)
> - - - http://www.ccrane.com/antennas/am-antennas/
>

#5. * RadioShack AM Loop Antanna # 15-1853 (Passive)
> - - - Discontinued (Find 'used' on eBay)

>
> * MTM Scientific AM Radio Loop Antenna (Passive)
> * http://www.mtmscientific.com/loop.html

> - - - Starter Kit, Deluxe Kit or Finished Antenna!
>
> * * * Home made 'Box' AM Loop Antennas
> - Usually 20" to 24" in size
> - - Generally a simple Passive antenna
> - - - Can be made Active with an add-on amplifier
>
>
> NOTE: Beyond $100 in the $200 to $400 range are the
>

#1.a. Kiwa MW Air Loop Antenna

#1.b. Quantum Loop Antennas

. . . #3. Palomar Loop Antenna

Basic Wire Back Yard Loop Antennas
Full-wave loops are very popular antennas. They are especially useful on 80 and 40 meters where they perform well at modest heights. These are closed loops that are one full wavelength long. Horizontal loops may be fed at any convenient spot. For best performance, make your horizontal loop into a square, especially if it is to be used on several bands.
http://www.radioworks.com/nloop.html

K9AY: How to Build the K9AY Loop Receiving Antenna
AY Technologies Antennas by K9AY. Excellent Antenna for Medium Wave Frequency DXing.
http://www.aytechnologies.com/Products/products.htm

Six Foot Square by Six Turn Loop Antenna
New Mid-Size Loop Antenna by Graham Maynard with Matching Balanced Amplifier: Frequency Range 50KHz - 5000KHz.
http://www.zen22142.zen.co.uk/Circuits/rf/6x6loop.htm

Ten Foot Receiveing Loop for Low-Frequency DXing
A Page out of VE7SL's Note Book. This 10 Ft. Air-Core Receiving Loop was originally designed and constructed for NDB DXing and now is used for LOWFER DX work.
http://members.shaw.ca/ve7sl/loop.html

Dave's HomeMade Loop Antennas
This is the loop antenna my dad built in 1958. Although I was only 8 years old at the time, I knew what this was for and how it worked. WebSite/Pages produced by Dave Schmarder Page Contributed by radiohighfreq
http://www.schmarder.com/radios/misc-stuff/loops.htm

4 Foot Box loop antenna
Heres a 4 foot loop project by Bruce
http://www.mindspring.com/~brucec/loop2.htm

ATL-3 Loop Antenna by Graham Maynard (UK)
Loop & Amp Project: ATL-3 Loop Windings are in the Shape of a Five 26" Sided Spiral
http://www.zen22142.zen.co.uk/Circuits/rf/atl3.htm

Alt-Azimuth Wooden "HOOP LOOP" Antenna by Linus
The Great Pumpkin" Speaks on "How To Make" a Loop Antenna from a Wooden Embroidery Hoop. Read the Exciting Saga of his journey in to the Kingdom of Hooppy-Looppy-Dom presented by RadioIntel.Com.
http://www.radiointel.com/anthooploop.htm

DXers Tool Box - DIY - Tuned Loop Antenna
The DXers Tool Box "How To Build" a Tuned Loop Antenna = How can you vastly improve your Medium Wave reception? The antenna consists of an LC (tuning) circuit formed by the air-core loop and a tuning capacitor.
http://www.geocities.com/SunsetStrip/Underground/8585/loop.html

Embrodary Loops
While these loop are for crafts, they can be a craft of art for improved AM radio reception!
http://www.craftking.com/crafthtml/embroidery_loops.htm

Hard Core DXing
Here's what nordic dx has to offer in their discription of loops in this website
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

K5DKZ - Three Foot Box Loop Antenna Kit
Complete Parts and Plans for a 3 Ft Box Loop Antenna "Kit" ~$85+SH
http://www.k5dkz.com/4loop1.html

KIT -by- MTM Scientific, Inc. -for- AM Radio DX Loop Antenna
KIT =//= Designed to Build an AM/MW Radio DX Loop Antenna =//= Offered by MTM Scientific =//= Deluxe Loop Antenna Kit: Includes ALL the Hardware for Building this AM/MW Radio DX Loop Antenna.
http://www.mtmscientific.com/loop.html

Long LoopStick Antenna for MW DXing
Wound on a Three (3) Foot Length of PVC pipe, the "Long LoopStick Antenna" was an experiment to try to improve AM radio reception without using a long wire or ground.
http://ourworld.compuserve.com/homepages/Bill_Bowden/page2.htm

TL Loop Receiving Antenna 10 KHz - 30 MHz
The principle of operation is that an rf voltage appears across the terminals of a loop when it is placed in an electromagnetic field. The voltage is proportional to frequency for a given field strength and so at Very Low Frequencies the voltage is very small and requires greater amplification but it is not quite as simple as that. The new TL Loop uses a unique feedback system to optimise the amplification/noise factor over a much wider range than has been possible hitherto.
http://ecforster.netfirms.com/LpAnt/Doc1.html

W2BRI Xmit Loops Contributed by n3hkn
Ham Radio xmitting loops. Detailed plans and reports from Hams experiences. Typical cost is $50 for pipe, capacitor, motor.
http://www.standpipe.com/w2bri/index.htm

"AM Loop Antenna Calculator" - by Bruce Carter
Here is a Great Tool for those Loop Antenna => "What Ifs...."
http://www.mindspring.com/~loop_antenna/amloop_calc4.htm

"Loop Antennas 101" Read This First
Minnesota DX Club's Loop Antenna's web page that is a 'Must Read' =Says It All= A Starting Point Class 101- - - TOPICS: Principles of the Loop Antenna - What is a Loop and Why Use It - Construction Principles - What Can I Use a Loop For - Loops Another Look - Pictures of Home Built PVC loops - Loop Links
http://www.frontiernet.net/~jadale/Loop.htm

* NEW => 2002 AM Loop Antenna Construction "Tips" by Bruce Carter
Introduction / Why Another Loop Antenna Page? / Mathematics of Rectangular Loop Antennas / Construction Articles / Loop Antenna (and Related) Links
http://www.mindspring.com/~loop_antenna/

Loop Antennas at Hard Core DX
TABLE: Number of Turns -v- Size of Loop in the Middle of this webpage.
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Loops and Rods =&= The Ferrite Rod Antenna
Theory / Formulas / Drawings = The use of a small Magnetic Loop as an antenna. The ferrite has the effect of intensifying the magnetic field inside the loop.
http://www.st-andrews.ac.uk/~www_pa/Scots_Guide/RadCom/part7/page5.html

Modify the common AM Radio Loop Antenna
Hard-Core DX & Nordic DX = Topics: Install Larger Ferrite Rod - Fix External Antenna -Add a Long Wire - Or a Loop - Construct it - Connect it - Add an Amplifier. Presented by Bruce Carter
http://www.hard-core-dx.com/nordicdx/antenna/loop/amloop.html

Sensitivity of Multi Turn Receiving Loops
LWCA - Multi turn wire loops are often used as low frequency receiving antennas. Basic electromagnetic theory is developed here as it relates to electrically small multi-turn loops at low frequencies. - Presented by William E. Payne, N4YWK
http://www.vlf.it/octoloop/rlt-n4ywk.htm

Using the Small Loop Antenna by Joe Carr
DXing.Com presents Joe Carr's Radio Tech Notes: Eight Page PDF Document provided by Universal-Radio.Com
http://www.dxing.com/tnotes/tnote09.pdf

How to Get Better AM Radio Reception
Features Loop Antennas and much more. The Antenna is 90% of Your Radio. Still Need More Signal? Try a Better Antenna.
http://geocities.com/SunsetStrip/Towers/3332/amradio.html

Introduction to Broadcast Band AM/BCB/MW DXing
The International Radio Club of America (IRCA) WebPages
http://www.geocities.com/Heartland/5792/bcbdx.htm

** Radio-Antenna-PRO ** H.Hertz-Forum
Remember you may need some Russian Text software for this groupThe international forum for radioengineers, scientists and hams. All about radioelectronics, radiocommunications, radiophysics, electrodynamics. About 250 members from 20 countries. In Russian language. Very active. Lot of interesting researches and discussions.
http://groups.yahoo.com/group/Hz/

Radio DXing with The Interference Problem
This is great for that annoying problem you have with your loop antenna, and you may think its the loop, think again it could be that messed up street light, next doors dimmer switch, and other something else you can't probably solve with just a loop antenna.
http://groups.yahoo.com/group/RadioDx/

"3805er" 80-Meter balanced coax loop
Small shielded rx only loop for 80 meters
http://www.seed-solutions.com/gregordy/Amateur%20Radio/Experimentation/3805er.htm

Magnetic Loop Antennas Receiving - by W8JI
This WebPage's Topic Are: - Small Receiving Loops - Loop Antenna Fields - Dipole Antenna Fields - Radiation - Loop Shielding and Balance - by W8JI
http://www.w8ji.com/magnetic_receiving_loops.htm

Radiation and Fields (Magnetic Loop Antennas) - by W8JI
This WebPage's Topic Are: - Electric Field - Magnetic Field - ElectroMagnetic Field - Near the Antenna - Losses - Near Field - Fresnel Zone - Farfield - Summary - by W8JI
http://www.w8ji.com/radiation_and_fields.htm

Shielded-Loop Receiving Antenna by N5FC
Shielded-Loop antennas have some nice properties that make them desirable as portable receiving antennas.
http://www.io.com/~n5fc/loop_ant.html

Antique Electronic Supply
A sorts of older variable tuning capacitors for your loop antenna that needs one bad.
http://www.tubesandmore.com

Fair Radio Sales
A wide variety of electronic components, radios, and variable capacitors for your loop antenna
http://www.fairradio.com/

Ocean State Electronics
Rhode Island's best selection for a wide variety of the best tuning capacitors for reasonable price, tell them that electronicdx (Adam Ebel) sent you.
http://www.oselectronics.com/ose_p96.htm

The Crystal Set Society
Here are some capacitor available from a club that devotes to Crystal Set Radio
http://www.midnightscience.com/catalog5.html

The Surplus Sales of Nebraska
This surplus store based in the state of Nebraska, has the one you might need, but they have minumim order policy
http://www.surplussales.com/Variables/AirVariables/AirVar1.html

Dan Small Parts and Kits
Dan's wide selection from Canada.
http://www.danssmallpartsandkits.net/

American Science and Surplus
A big spool of wire here just about for AM

http://www.sciplus.com/category.cfm?subsection=15&category=150

DigiKey.com
For ribbon cable and other sorts of wire.
http://www.digikey.com

Femco Magnet Wire
Femco Magnet Wire is a joint venture company that has been supplying round insulated copper magnet (winding) wire to the transplant market since 1988.
http://www.femcomagnetwire.com/

Litz-Wire,com
Welcome to Litz-Wire.com!
http://www.litz-wire.com/

MCM electronics
They do sell wire and magnet wire here
http://www.mcmelectronics.com

MWS Industries
A place for all sorts of wire for business and industry
http://www.mwswire.com

Magnet Wire from Radio Shack
This is what I use often
http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&category%5Fname=CTLG%5F011%5F010%5F004%5F000&product%5Fid=278%2D1345

Mouser Electronics
Mouser has the biggest spools here for a great price, that makes sense
http://www.mouser.com

Ocean State Electronics
magnet wire at a good price
http://www.oselectronics.com

WIRE "Flex-Weave" Antenna Wire
"Flex-Weave" is a hybrid aerial wire that consists of 168 strands of woven #36 solid copper wires that provide high strength and extreme flexibility. The most popular version of "Flex-Weave" is the 'equivalent' of #14 AWG wire size. It can be 'used' for unsupported spans up to 200 ft (100-150 ft in areas with high ice and wind loading).
http://www.radio-ware.com/products/fw.htm

WIRE "QuietFlex" Antenna Wire by Antennas & More: Insulated, Strong, Flexible and Durable
"QuietFlex" Antenna Wire by Antennas & More: "QuietFlex" #14 AWG Wire has more than 41 Strands tightly twisted together under its Flexible Insulation making it both Strong, Flexible and Durable.
http://www.antennasmore.com/wire&.htm

Scanning, Ham Radio and Public Safety Resources
- Links to the various webpages with resources for the Ham Radio Operator and Scanning Enthusiast. Resources such as; Monitoring Police and Fire Communications, What Antennas to use, Secret Scanner Frequencies, Radio Programming Software, Radio Mods and Operating

Tips, Professional resources for Public Safety Management, Guidance and Self-Help.
http://myweb.accessus.net/~090/resources-ps.html

Amidon Ferrite rods, bars, plates, and tubes.
https://www.amidoncorp.com/

Bytemark Ferrite rods, bars, plates, and tubes.
http://www.bytemark.com/products/rod1.htm

11870. File - UploadingFilesLinksPhotos.txt

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-01 06:17:55 UTC
From: loopantennas@yahoogroups.com
Topic: 457 Message: 11870

If you have a link relevant to the group, please post it in the Links section. If you just put it in a message, it will get lost in the shuffle after a few days. The coverage of the list is pretty broad.

All members can upload Links, Files, and Photos.

A few guidelines:

Try to place them in the proper folder, if it exists. If not, you can either just put it in the root folder and eventually I'll move it into the proper place, or create a folder.

When creating a folder or uploading a file or photo, please don't use spaces or punctuation. You can either use caps for the first letter of each word, or use underscore as a space.

Like this: "4x8Loop" or "4x8_loop" or "Steves_4x8_Loop"

Not like this: "Steve's 4 x 8 Loop." That goes for Folder names and File names.

A special note about the Photos section: Please crop in to the important parts. For photos, JPG saves smaller and looks better, for line drawings GIF is smaller and looks better. Please do not use TIFF/TIF or BMP files, the file size is way too big and I may delete without notice.

Feel free to ask if you need help figuring out how to crop and resample. Irfanview is a fairly easy to use program that loads just about any file, you can crop and resample from there: http://www.irfanview.com

Or for more complex stuff, another free program is GIMP: http://www.gimp.org

Attachments are now allowed, but please use judiciously. Rather than going out with the messages, they will be stored on the list but you'll get a link with the message.

A last note: if you see something in any folder or in the messages that looks like spam or simply inappropriate, don't post on the list- email me directly and tell me about it and I'll take care of it with a minimum of fuss.
loopantennas-owner@yahoogroups.com

Thanks,
Steve Greenfield

11871. Stacked Toroid Ferrite Loop with Palomar Amp

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-01 19:59:52 UTC
From: lowalacrity@...
Topic: 11871 Message: 11871

I have listed on Ebay my STFL and Palomar Amplifier. I modified the loop to be a plug-in for the Palomar. It works quite well on both LW and MW. A lot of buzz on it here years ago. I'm throwing in a stock 160/80 meter head as well. I hate to part with it but my current interests lie in Ham Radio. Questions can be posted here or on ebay. Search Palomar Amplified Loop Antenna. Thanks, John KG6ZBN

11872. Chameleon P-Loop v2.0 High Power Operations

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-14 19:33:12 UTC
From: alexander.the.hard@...
Topic: 11872 Message: 11872

Chameleon P-Loop v2.0 High Power Operations

https://www.youtube.com/watch?v=PONUnDxyqt8 https://www.youtube.com/watch?v=PONUnDxyqt8

- C

11873. Re: Fwd: [regenrx] International Crystal shutting doors

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-10 02:12:36 UTC
From: n1kgy@...
Topic: 11821 Message: 11873

That really stinks. There were only a handful of decent vendors for crystals to begin with...
Now they're all closing their doors or being 'acquired' by big corporations that don't have any motivation to serve hams and hobbyists, or other small customers.

Chuck
N1KGY

11874. Re: Fwd: [regenrx] International Crystal shutting doors

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-15 05:25:58 UTC
From: gnuarm.2007@...
Topic: 11821 Message: 11874

What does International Crystal do for Hams that other crystal makers don't? What special things do Hams need other than specific frequencies? If there is demand they will make the crystals. If there isn't adequate demand the only companies making those frequencies will go out of business.

Rick C.

---In loopantennas@yahoogroups.com, <n1kgy@...> wrote :

That really stinks. There were only a handful of decent vendors for crystals to begin with...
Now they're all closing their doors or being 'acquired' by big corporations that don't have any motivation to serve hams and hobbyists, or other small customers.

Chuck
N1KGY

11875. Does the ideal loop exist?

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-18 09:48:13 UTC
From: f8dql@...
Topic: 11875 Message: 11875

Hello,
I am living in a very noisy electromagnetic environnement, with lot of QRN/QRM.
I would like to set up a loop antenna only for reception, TX will be done on another antenna.

So I'm looking for a model that would be adjustable remotely, ideally through the coax cable.

Do you have any recommendations, commercial or not?
73

11876. durable designs to carry around in motorhome

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-18 16:09:54 UTC
From: evofxdwg@...
Topic: 11876 Message: 11876

Recently retired Electrical Engineer and new forum member here. (not an active ham). I would like links or tips on durable loop designs i can carry around in a bay of my motorhome and deploy outside, possibly on top or on a pole or tree, on a picnic table, hang from a rope over a branch, etc., to the extent practical. I just got a Tecsun PL-880 to play with. I realize i will have to come up with, or copy, a (possibly active) coupling method as the loop may be remote from the radio. The tuner would have to be protected as well. I will initially be interested in the AM band.

2 ideas:
1. Bend thinwall PVC pipe in a circle (using heat gun or whatever method - I currently have not experimented with minimum bend radius!) Carefully thread a few loops of wire thru it, including a coupling loop. Cut/split a T fitting in half for installation at the joint, route wires thru unused T coupling, and glue together. Spacing & position of wires in loop is uncontrolled (I vaugely think from fields/physics that this doesnt matter for a magnetic antenna - confirm?) I have found one construction article that uses multi-conductor data cable for a loop by cutting and splicing appropriate colors. I belive I can thread a single wire multiple times thru a 1/2" pipe though. The T provides the possiblity of waterproof if a sealed base is constructed using an inexpensive NEMA waterproof box and glued to it

2. If cant bend PVC thinwall to small enough circle, construct PVC housing as above but straight sections with 90 degree couplers (no need to bend PVC), in a square or diamond. A variation might use 8 45 degree couplers which should be easier to thread wire thru.

3. Build a traditional multi-turn loop with spreaders, but cover the wires along thier plane with heavy tape or rigid plastic sheeting for durability protection.

Comments? Construction plans? With a Tecsun PL-880, will the loop provide much in the way of improving "listenability" out in the country? In the city? Im inclined to build a loop antenna just to see.

11877. Re: durable designs to carry around in motorhome

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-18 18:59:14 UTC
From: alienrelics@...
Topic: 11876 Message: 11877

I made a shielded loop by taking some computer ribbon cable, rolling it into a tube, and inserting it through a piece of flexible copper tubing. Then I curled the tubing into a circle. I then offset the ends of the cable and soldered together.

You can select the inductance with a rotary switch, if needed. Rather than soldering, you could use two IDC connectors of each gender. Simply peel one wire off the edge of each on opposite sides, and offset one ribbon cable before clamping down the IDC. Don't offset both!

This was for a BFO metal detector, so I needed it to be VERY stable. I had previously tried wood and plastic forms (covered with shielding tape), and found they drifted terribly. Move from shade to sun or back and it was unusable.

With the copper tube, it was rock solid. Of course, you can only ground one end of the copper tube.

Steve Greenfield AE7HD

11878. Re: durable designs to carry around in motorhome

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-18 19:06:14 UTC
From: gnuarm.2007@...
Topic: 11876 Message: 11878

Details of building a loop antenna for reception will vary according to your specific needs. The one comment I would make is that a loop antenna will require a rotator. Unless you lay the loop horizontal it is directional much like a dipole.

You might consider using coax. That is already waterproof (or can be) and can be used to make a shielded loop of any size and as many turns as you would like. RG-6 has an 18 gauge center conductor giving a low resistance across a range of frequencies. Pick your total cable length for the loop and buy two coax cable, each half that length. Connect just the center conductor in the middle (not the shield) and the other ends become your feed point. There are many ways to couple to this loop, and easy one is to use a ferrite core.

Rick C.

11879. Re: durable designs to carry around in motorhome

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-18 22:45:45 UTC
From: silvergak@...
Topic: 11876 Message: 11879

I use flat 6 conductor telephone cable inside PEX tube. 6 turn loop, no twists, good capacitor, small ferrite on one wire. measure Z at freq of intrest. Configure the conductors for the freq. desired.

11880. Re: Does the ideal loop exist?

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-18 19:17:33 UTC
From: jjdobrikin@...
Topic: 11875 Message: 11880

Hi The quintessentially 64/64,000 Dollar question.
There are commercial Receive Only Loops from Wellbrok Pixel and others but they are based on wide band low noise Pre-Amps, no adjustable Tuning.

For MW the C.Crane Twin Coil Antenna out doors on a Rotator works well. One could convert to HF by using a multi coil Ferrite Loop Stick from a Shortwave Portable Radio,there are some available on Ebay from a high end Russian Portable.

For HF one can use a DIY Loop and a Varactor tuned wide band low noise Pre Amp. Also available on ebay ; search antenna Hula Hoop.

I have a Russian built Preamp with a revised schematic to add Varactor tuning. http://www.ebay.com/itm/Flag-Pennant-LOOP-HF-Antenna-KIT-HAM-RADIO-SWL-50-Ohm-with-Preamp-/201553084711?hash=item2eed800127:g:Sb8AAOSwJ4hY-dzb http://www.ebay.com/itm/Flag-Pennant-LOOP-HF-Antenna-KIT-HAM-RADIO-SWL-50-Ohm-with-Preamp-/201553084711?hash=item2eed800127:g:Sb8AAOSwJ4hY-dzb

Both Preamps are powered thru the Coaxial cable.
73 de Jordan ve7jjd
http://dl2kq.de/ant/3-96.htm Varactor Voltage Filter? Jordan Dobrikin <jjdobrikin@gmail.com> to Anton Hi As I see it C9, R5, C1, & R1 is smoothing filter. Are they necessary if the variable voltage power supply is well filtered? Also is there an English version of the text? 73 de Jordan ve7jjd to me Russian English Translate message Turn off for: Russian Hello, Jordan. Yes, it is filter. If you use long wires from power supply to preamp you need it. If you use short wire I think you can remove this filter. But I would keep it. Unfortunately only russian version, but you can write to the author DL2KQ, I think he knows English and can translate :) Понедельник, 14 ноября 2016, 10:18 +08:00 от Jordan Dobrikin <jjdobrikin@gmail.com>: Power receiving antenna The differential amplifier for receiving the frame and ferrite antenna. For receiving loop antennas (such as "flags") requires an amplifier. With the noise and gain no problems. This is easy to do. But such an antenna because of the small useful signal from the amplifier requires a very high attenuation coefficient of the in-phase component (CMRR CMRR or English from the Common-Mode Rejection Ratio), as otherwise made braided power cable spurious signals completely spoil the work of the antenna (which is often the case and is the source of the opinion that such antennas operate as himself). The easiest way to implement it, making a differential amplifier with a large CMRR. And the need is power. Structural type of scheme balun + unbalanced power will not give a good result. Even the best such transformers, common mode rejection ratio of 1.8 and 3,6 MHz (and receiving antennas are needed mainly on the low bands) rarely exceeds 40 dB (talk about high impedance transformers). But that is not enough: a typical receiving antenna gain -30 dBi, its ratio F / B another 20 ... 30 dB, then we need a minimum of 50 ... 60 dB attenuation in-phase component. Differential is such suppression may be amplifiers. But they need to be integrated. The idea to make difkaskad discrete transistors is divided on almost impossible to find a pair of transistors with an accuracy of 0.3 ... 0.1% (this is the same 50 ... 60 dB suppression, only expressed as a percentage). Average performance of differential stage op amp provides a suppression, but it has to have the disadvantage that the input impedances of both inputs are obtained by different. From this dish loses its symmetry. Decision fully satisfies us is the use of a specialized differential amplifier AD8129 . Below 4 MHz it has the CMRR higher than 80 (!) DB and two differential inputs with an equal and very high (> 4 MOhm) impedance. AD8129 separate advantage is that the differential inputs are used to set the gain, i.e. they do not need to load anything extra. Schematic of the amplifier circuit is shown in the following figure. Black elements on it are shown mounted in any case, the red - only when the magnetic antenna with the ferrite, green - only when the frame. The gain (in this case, it is equal

to 30) is given by the ratio of voltage R7 / R6 resistors. These resistors have no effect on the input impedance on the working inputs (pins 1 and 8 chips DA1). Power bipolar chips (note, in the scheme of two different ground). Filters L1-C2-C4 and L2-C3-C5 unleash the power (this is in addition to the CMR). The mid-point (ground amplifier) defines stabilizer DA2. Power to the amplifier can be supplied by a common coaxial cable (as shown). For further isolation from the dirt on the outside of the braid mounted decoupling choke T2. He wound LF ferrite core, inductance> 1 mH. RF choke L4 divides the power and output RF signals. If the power is supplied to the amplifier not coax, and on a separate line, L4 is not necessary, and T2 is two-winding. In this case, both windings T2 are wound in one direction (as in any power throttle) 12 and the voltage + V is applied to the second input through DA2 winding T2. The output of the amplifier through R8 is connected to the separation of HF transformer T1, a low interturn capacitance and the winding ratio of 1: 1. This transformer is needed to isolate the common-mode signal between the amplifier ground and the braid of the coaxial drop cable. Resistor R8 coordinates transformer T1 (DA1 at the very low output impedance). Protective diodes VD7 VD8 (any silicon high) to prevent overloading the receiver (DA1 may issue up to 5 V amplitude, which is not like all receivers). C7 separation. L3 elements C10 shared shack in the power of the amplifier and the receiver input. Inductors L3, L4 inductance of 200 uH and above. But back to the door of the shack amplifier: terminals 1 and 8 DA1. As already mentioned, this high-impedance differential inputs with high (> 80 dB) CMRR. They need to solve three problems: Snap DC. This is done by resistors R3, R4. Their face value is not very important (in addition to working with a ferrite magnetic antenna, see below.) From 100 k to 1 M. But desperately important that they are identical: they will have to pick up the digital tester with honors no more than 0.1% (preferably less). Otherwise, they skewed input of the amplifier, with a corresponding decrease in AUC. Protect entrances at the transmitter. Couple VD5 RF diodes, VD6 to deal with it. Connect the antenna and the necessary elements to it. It depends on which antenna will be used: If apertodicheskaya frame, such as the "flag", it is connected directly to the inputs. Additionally, the resistor R2 is set with a resistance equal to the input frame (typically a few hundred ohms) If this ferrite magnetic resonance antenna or 1 ... 2 Coiled frame, R2 is absent, and the restructuring are set varicap VD1 -VD4 (I used BB640) and management of the chain of the shack: R1, R5, C1, C9 . In addition, when working with a ferrite magnetic antenna (MA) is necessary to reflect on the nominal value of R3 and R4. It defines the quality factor of the antenna circuit (of course, in addition to single quality factor of the antenna coil). Depending on the inductance, single Q MA and the desired bandwidth (no adjustment) and select ratings R3, R4. The following figure shows the spectrum in the band 100 kHz at the output of the amplifier described with denominations R3 R4 390 k and attached ferrite magnetic antenna on the rod with a diameter of 400 μ = 8 mm and 100 mm in length. The range of 160 meters, the antenna is located inside the building, so in addition to the useful signals can be seen more and a lot of noise and the degree of attenuation: The output level of terrestrial noise resonance MA is - 93 dBm (the vertical scale in the figure in dBm), ie 5 uV, which roughly corresponds to the level of noise with a full-sized antenna. If you need to change the gain, then it is done divider R7 / R6. AD8129 can provide a gain of up to 100 times on the low HF bands. Of course, for normal reception, the antenna should be brought somewhere far away and higher up on local sources of interference. Update on 01/14/2015. That review UK8AFV described in the amplifier. There have just above the circuit board. Beer Sheva, 26.09.2014

11881. Re: [loopantennas] Re: durable designs to carry around in motorhome

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-18 23:28:12 UTC
From: Jordan Dobrikin
Topic: 11876 Message: 11881

Hi
For Medium Wave I suggest a C.Crane/Justice Twin Coil Antenna, (Ferrite Loop Stick), mounted piggy back on a Low cost HDTV Antenna/Rotator both available on ebay with good prices.

For an "Electrically Small", Air Loop, plain wire, 1 to 2 turns roughly one tenth of a Wave Length, as large an Area as possible, driving a Low Noise Wide Band Preamplifier.

For Loops the name of the game is Low Inductance, large surface Area Rotatable. The various copper pipe, Coax, etc. are for transmitting, with Receiving coming along for the ride.

For a "Full Size Air Loop hanging from a tree/pole we are back to a Low Noise, Wide Band Preamplifier.

Low Noise Wide Band Preamplifier and Varactor Tuning option.
http://dl2kq.de/ant/3-96.htm

Check in with the Yahoo Group ultralightdx to see if a remote FSL Antenna is feasable
73 de Jordan ve7jjd

http://dl2kq.de/ant/3-96.htm

Google Translation of Russian Text
Power receiving antenna
The differential amplifier for receiving the frame and ferrite antenna.
For receiving loop antennas (such as "flags") requires an amplifier. With the noise and gain no problems. This is easy to do.
But such an antenna because of the small useful signal from the amplifier requires a very high attenuation coefficient of the in-phase component (CMRR CMRR or English from the Common-Mode Rejection Ratio), as otherwise made braided power cable spurious signals completely spoil the work of the antenna (which is often the case and is the source of the opinion that such antennas operate as himself).
The easiest way to implement it, making a differential amplifier with a large CMRR. And the need is power. Structural type of scheme balun + unbalanced power will not give a good result. Even the best such transformers, common mode rejection ratio of 1.8 and 3,6 MHz (and receiving antennas are needed mainly on the low bands) rarely exceeds 40 dB (talk about high impedance transformers). But that is not enough: a typical receiving antenna gain -30 dBi, its ratio F / B another 20 ... 30 dB, then we need a minimum of 50 ... 60 dB attenuation in-phase component.
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almost impossible to find a pair of transistors with an accuracy of 0.3 ... 0.1% (this is the same 50 ... 60 dB suppression, only expressed as a percentage).
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Schematic of the amplifier circuit is shown in the following figure. Black elements on it are shown mounted in any case, the red - only when the magnetic antenna with the ferrite, green - only when the frame.
The gain (in this case, it is equal to 30) is given by the ratio of voltage R7 / R6 resistors. These resistors have no effect on the input impedance on the working inputs (pins 1 and 8 chips DA1).
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Update on 01/14/2015. That review UK8AFV described in the amplifier. There have just above the circuit board.

What is a loop and why use it?
1). A loop antenna is a small multi turn loop of less than 1/10th wavelength in length. The loop is wound on a form, which may be either box (solenoid), or spiral (pancake) wound. The core material can either be air, or a powdered iron compound (Ferrite). The gain of a loop is much less than a longwire, but it has much less noise pickup. A properly designed Loop primarily responds to the magnetic component of the radio wave. Note that noise resides primarily in the electrical component. A vertical antenna responds mainly to the electrical component.

Loop Antennas
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This page was last updated on 02/04/13.

Loop Antennas
The Principles of the Loop Antenna article was in a newsletter of the MDXC.
The next three were from a talk that Mike Bates and James Dale gave to the

Northland Antique Radio Club's Radio Workshop at the Pavek Museum of Broadcasting.
What is a Loop and Why Use It
Construction Principles
What Can I Use a Loop For
Loops Another Look
Loop Links
Principles of the Loop Antenna
A loop antenna is an antenna primarily for the AM broadcast and the Longwave bands. There are two different types of loop antennas, one is the ferrite bar (as in your am radio), the other is wound on an air core form.
A loop antenna is very directional. The pickup pattern is shaped like a figure eight. The loop will allow signals on opposite sides to be received, while off the sides of the loop the signal will decrease or be nulled out. The nulling feature will allow you to remove a local station on a frequency and pick up another on the same frequency by removing the local signal.
A loop may have an amplifier or may not.
Air core loop antennas come in many sizes. The larger the loop the more gain there is. A small loop will actually lose part of the signal. That is why most small loops will use an amplifier. There are two ways a loop can be wound, box or spiral. In the box or solenoid loop the plane of the winding are wound perpendicular to the diameter of the loop, so each loop is the same size. In the spiral loop the plane of the windings are wound parallel with the diameter of the loop, so each loop gets smaller as you wind into the center of the loop. A loop needs to be able to rotate to null out a station. And a loop also needs to be able to tilt from vertical. This also helps in in nulling of a signal (altazimuth feature).
The number of turns the loop needs is determined by the size of the loop, the frequency range that you want to tune and the value of your tuning capacitor. The larger the loop the fewer turns you will need. A 4 foot loop needs 8 turns and a 2 foot loop needs 18 turns. The capacitor that is used is the standard AM tuning capacitor with a range of 10 to 365 pf. The tuning capacitor is used to tune the loop to the frequency that you want to listen to. When you are tuned in to the frequency the signal will peak. You may not be able to tune the full frequency range that you want to tune. So you will need to use a 2 section capacitor and switch the second section in. (more capacitance).
There are three ways that you can connect your loop to your radio.
One way is not connecting it at all. (This requires a portable radio with a internal loop antenna.) The field of the loop will radiate the peaked signal and you will be able to pick it up with no connection to the radio. You can move the radio around to get the best reception.
You can also direct couple to the loop. This way you connect to each end of the loop and also to the center tap of the loop. Using this method you will need to use it with an amplifier.
The last method is to use a pick up coil. This consists of one turn of wire that is placed inside the loop on the cross arms. This is then connected to the radio. The distance from the main tank coil can be determined by using a pocket radio and moving it inside the loop to find the place were the signal is strongest, and were it peaks sharpest.

In the past loops were made from wood. I have built them and found them to be heavy, clumsy, and flimsy. The mounting system were not very stable. In talking with Mike Bates, he came up with the idea of using PVC to build loops. PVC is easy to cut and because you use PVC molded parts, the loop that you make are is stable. By using PVC cement for some gluing and small nylon screws to connect parts you have no metal parts except the wire and tuning cap to throw the pattern of the loop off. Using PVC it helps to have a drill press, but if a person drills very carefully there should be little problems.
What is a loop and why use it?
1). A loop antenna is a small multi turn loop of less than 1/10th wavelength in length. The loop is wound on a form, which may be either box (solenoid), or spiral (pancake) wound. The core material can either be air, or a powdered iron compound (Ferrite). The gain of a loop is much less than a longwire, but it has much less noise pickup. A properly designed Loop primarily responds to the magnetic component of the radio wave. Note that noise resides primarily in the electrical component. A vertical antenna responds mainly to the electrical component.
2). Why use a loop?
A). No available space for a longwire antenna
B). To eliminate unwanted signals, and noise
C). Radio Direction Finding
D). To improve the performance of a simple receiving system, by providing pre-selection which improves image rejection, and adjacent channel selectivity.

3). History
A) 1915-1920’s Early receivers used loop antennas, until they were discontinued in favor of long wire antennas, prior to 1930.
The loop antenna appeared again about 1938. This time it was used to eliminate the need for a longwire antenna, and to provide for safer operation of the small midget AC/DC sets that came into wide use at that time.
B). The first known use of a high performance loop antenna is the box loop made by Ray Moore in the mid 1940’s(1) This antenna was written up in DX Horizons in 1960. The Moore Loop was wound on a 40" square box frame. Note: Ray Moore is the Author of the book on the history of Communications Receivers, and a new companion book on Transmitters.
C). The next major advance in Loop Antenna design came about as a result of advances by Gordon Nelson of the National Radio Club. The NRC Loop Antenna(2)was designed by Nelson in the Mid to Late 1960’s time frame, Nelson was at M.I.T. at the time. The major advance that Nelson made was allowing the loop to rotate in the vertical as well as horizontal plane. The addition of the Alt-azimuth adjustment allows for the elimination of the effects of "wave tilt" and allows for much deeper nulling of certain stations. This loop was a 35" on a side and wound on a wood frame. In one form it utilized another Nelson first, a direct coupled Balanced amplifier using 2N4416 J-FET’s with the outputs fed to a balanced feedline. The other version was link coupled to the receiver.
D). Sanserino Loop (1970-1985) This is a 2 foot Air core box loop designed

by Ralph Sanserino, and later marketed by Radio West. This loop antenna used a Differential Amplifier similar to Nelson’s except the output is not balanced. This antenna also has the Alt-azimuth feature. (available as a kit) The amplifier was later used in the Radio West Ferrite Loop Antenna (see below) .
E). Joe Worchester (1970-1977) a retired GE engineer developed the "Space Magnet ", a small 12" ferrite rod loop antenna using a Bipolar Junction Transistor amplifier(3). Nulls were not as deep as with the Nelson Loop. This is also probably the first loop antenna commercially available to the hobbyist, at a cost of about $45.00 if I remember correctly. Later versions utilized the Nelson Alt-azimuth feature. This antenna also used a Faraday Shield around the Ferrite Bar.
F). Mackay Dymek (1974-Early 1980’s) , Palomar Engineers (1977-current). These are small ferrite antennas made by larger commercial concerns. The Mackay Dymek was primarily for the Broadcast Band, where the Palomar has plug in coils for ranges from 10Khz to 15Mhz. Note that both of these antennas incorporated alt-azimuth design.
G). Radio West(1979-1985) 23" ferrite rod assembly using Sanserino Differential Amplifier, direct coupled, Has Alt-azimuth feature, $160.00 in 1979.High performance for its day, quieter than the "Space Magnet"
H). Quantum Loop (about 1990) by Gerry Thomas is a small ferrite rod less than 1’ in size (length), with a high gain 40Db amplifier. has Alt-azimuth feature, in current production in various forms $135-$200.00.
I). KIWA Loop 1992 First Air core available since Nelson/Sanserino. Uses IC amplifier Opto isolated regeneration and varactor tuning. High performance, solidly built, in current production. $360.00.
J). RSM Communications (Ray Moore) RSM-105 (1994) A high performance transformer coupled, non amplified antenna described by Moore in Dec 1994 IRCA DX Monitor, Later in March 6 1995 issue of NRC DX News. Still in production? Price?? 35" spiral wound.
4). Electrical Design Characteristics
A). Two main types of Loops available 1). Directly Coupled and 2). Indirectly coupled (Transformer coupled) The Directly Coupled Loop has its windings directly attached to an Amplifier. Usually the main Tank Coil (parallel tuned circuit that forms the loop primary) in the loop is grounded at the center of the winding (center tapped), to allow for electrical balancing. The Amplifiers are usually but not always J-FET’s, with 2 FET’s in a Differential configuration, where the ends of the tank winding go to each FET gate. The Transformer coupled version uses a link winding to couple the signal to the receiver. This version can be amplified or non amplified.
B). The pick up pattern of a properly designed loop should be a figure 8 pattern. The null should be of the same depth, if the antenna is rotated 180 degrees horizontally (loop should not be adjusted for alt-azimuth, but left vertical 90 degrees from the ground). The 180 degree symmetry should be the same + or - one degree. If this condition does not occur the Antenna is not properly balanced. In a transformer loop balance deals with the signals being equal on both lines of the feed line (equal potential to ground). The feed line should preferably be shielded with the shield being grounded to the receiver chassis. If the line is affected by an electric

field signal, a metallic object, or some other imbalance to ground, the loop will become unbalanced, resulting in a distortion of its pick up pattern. Balance is critical to getting the best nulls, and for precision Radio Direction Finding. The use of a broadband balun allows for better balance, but thought should be put into the design of the link winding, and receiver feed line, as well as the mechanical integrity of the coil.
C) The transformer coupled loop is the easiest to balance, especially if it is an air core loop. Ferrite loops are not as easy to balance due to the compression of flux lines in the ferrite. These antennas seem to be somewhat more prone to pick up electric fields.
D). In a directly coupled loop, the balance is affected by the gain of the amplifying devices on either side of the center tap being equal. If they are not very close to, or equal, they will cause the voltage in the tank coil to be imbalanced with respect to ground causing the same undesirable effects that the feed line caused in a Transformer Loop.
E). Some loops utilize a Faraday shield to maintain balance (4) Usually a one turn loop. these are usually circular, and are used on ships and other areas where direction finding is necessary. An example of this antenna is the 160 meter loop wound out of coax described by Doug DeMaw (5) Using a Faraday Shield will affect the pick up gain, as well as the "Q" of the tank coil(3) Another variant of the shielded loop is the Mike Hawk Loop(6)
Also note that imbalance is sometimes referred to as "Antenna Effect"(4)
Also please note that a balanced loop antenna can be spoiled to a cardioid pattern by putting a vertical sense antenna within its field.(4)
F). The amount of coupling (placement of the link turn) is critical to the performance of the Transformer Coupled Loop. The placement can vary depending upon the load that the antenna sees. The best way to obtain optimum performance is to experiment with various distances from the Tank Coil. Most designs call for this to be wound amongst the tank coil windings, however this coupling is much too tight for most uses, and allows for tuning to be too broad, Q to be too low, and sensitivity to be not quite optimal.
G). The physical size of the Loop Tank Coil affects the overall pickup (capture ability) of the loop. The larger the winding size the greater the pickup. Larger loops will also be easier to balance than smaller ones.
H). The Tuning Sharpness "Q" is determined by the size of the wire (surface area). The lower the resistance the higher the "Q" will be. The loading of the Tank Coil also affects the "Q". This more than wire resistance affects the Transformer Coupled Loop. In a Transformer Loop, the placement of the Link Coil in relation to the main tank (distance) determines the amount of coupling, and hence the loading of the tank circuit. The point of critical coupling can be found by varying the coupling link distance, while comparing tuning sharpness and gain. the critical coupling point will be found at the sharpest tuning before the gain starts to drop. Tuning will continue to sharpen (slightly), but gain will fall off more rapidly, as one couples more loosely (moving the link physically farther from the Tank Coil). Further improvement can be had by matching the load impedance to the link coil with a matching transformer. This can be done as part of a balun, or following the balun (lead-in side). For optimum performance all impedance’s in the system should be properly matched.

I). The L/C ratio and mechanical design of the coil should be considered when looking at a good design for a loop. The loop should be mechanically stable (wires not flopping loose) The distributed capacitance between turns should be kept low by proper design to allow for wide tuning range, but not too wide to degrade the length to diameter ratio of the coil. Note that the best null performance occurs with the best length to diameter ratio of the Tank Coil. A spiral wound coil affords the best performance in this regard, but does not afford as great a signal pickup as a solenoid coil of the same diameter. (A Trade off)
Also note that the L/C ratio should allow for one 10 to 500pf variable capacitor to tune the whole Medium Wave Broadcast Band.(530-1700 KC)
J). Performance can be further enhanced if the amplifier following a transformer coupled loop is tuned. This provides still better image rejection, and adjacent channel selectivity. It is important that the amplifier be isolated from the loop by a transformer to maintain balance and pattern integrity.
K). Note that the spacing of the windings determines the inter-electrode capacitance. The wider the spacing between windings, the lower the capacitance, and the higher in frequency the loop will tune. the use of interlaced spreaders further reduces this effect (solenoid loop) provided that the spreaders are of sufficient width. Also note that the winding spacing is a compromise with the length to diameter ratio.
Construction Principles
5). Mechanical design
A). Up to now, loops were made from wood. It was used because it was readily available and easy to work with. Wood does have disadvantages. They are, finding good wood, making accurate cuts, and heavy weight.
B). In a wood loop, the alt-azimuth tilting mechanism does not work very well. Wood loops use a bolt for the alt-azimuth tilt. It uses an arm that goes from the loop to a clamping setup on the mounting post. This does not work very well, as you need to tighten the bolt every time that you change the vertical tilt. The bolt will become loose, and on high angle tilts does not hold very well.
C). Most loops use a pipe mounted vertically with a dowel to do the horizontal rotation. This does not work well, as it allows the loop to move on it own. Wood will also wear after some use. This allows the loop to lose its square ness which can affect the loops pick up pattern.
D). The first loop I built was the Harley Loop(7). It is small spiral loop that was easy to build, but had no Alt-Azimuth feature, so the loop would not vertically tilt. It uses two cross arms with saw kerfs part way through to hold the wire.
E). I then built the 4 foot NRC Loop(2). This loop worked well, but the Alt-azimuth tilt needed work so I did some modification on the tilt mechanism. I wanted to design a tilt that would be easy to tilt and would stay in place. I tried different ideas and in my design I used a 3 inch PVC pipe for the mast and the loop head would tilt off that, this did work better but was not perfect.
F). While talking to Mike Bates(1995) about loops, He had the idea to build a large spiral octagon loop(5ft), out of PVC pipe and Alt-azimuth tilt it with a tripod. We built the loop, and this got my interest in using PVC for

designing and building loop antennas. The tripod did not work very well due to the heavy weight of the loop head, but the performance was quite good.
G). My next design was a 4 foot PVC spiral loop that is collapsible. New features added to this loop was the use of a lazy susan for the horizontal rotation of the loop, however, you need to use a liberal amount of grease to give it tension. For alt-azimuth tilt I took a 3/4 inch PVC tee, reamed out the inside smooth, and cut a slit length wise. Through this I ran a piece of PVC pipe and with the use of elbows and tees attached it to the loop head. I then used plastic hose clamps to adjust the tension. This worked better, but still did not work very well. It is hard to get the angle just right, it does not move smooth enough.
H). Then I built a 4 foot Loop modeled from the NRC plans(2) out of PVC. For this loop I added the use of PVC in the base. I used the same type of Alt-azimuth tilt mechanism as the earlier spiral. To mount it to the loop head, I used a hole in the crossover of the loop to attach to the alt-azimuth mount. This was done to allow for having the ability to build different loop heads, like one for the longwave beacon band. This allowed the loop head to rotate on the mounting mechanism which made the loop unstable, and not very easy to use. I decided to make the mounting like the spiral loop, but to add the tees, I needed to cut part of the tee to mount it on the loop arms. When I assembled it for fit, I found out that cut out tees worked much better for tilting, and hose clamps are no longer needed. The alt-azimuth tilt mechanism now works very smooth and holds well at all angles.
I). The 2 foot loop was also built based on the NRC plans(8), it employs a gimbal mount for alt-azimuth tilt.
J). These loops are made entirely out of PVC except for the base plate that employs a lazy susan to rotate the loop. I built jigs to drill the holes in the cross pieces. A drill press helps a lot, but with very careful measuring and drilling, a hand drill may work. In my first loops I used PVC cement to glue the loops together. This cement sets up very fast, so you have to be very careful assembling it. I found out that some parts can be glued, but on some it is better to use a small nylon screw. This allows for you to align the pieces right on. To do this drill and tap a hole for the screw and run it though both pieces of plastic (PVC).
K). It helps to make a jig to wind the tank coil onto the frame. To accomplish this I mounted a Lazy Susan to a board, and ran a board with two vertical pieces of PVC Pipe The loop frame slides over the pipes, allowing the loop to be rotated while the wire is brought off of the spool in the same direction, while being laced through the holes in the frame. This helps greatly, in minimizing twisting of the wire.
L). Reasons for using PVC in loop construction:
1). Readily available, at low cost
2). Easy to work with, Saw and drill are main tools required, however, a miter box saw allows for clean perpendicular cuts.
3) Very symmetrical loops can be built, because the fittings are identical, and pre made.
4). Very low weight
5). The ability to come up with modular designs 6). The ability to design a collapsible loop that can be mechanically strong, allowing for easy

transport
7). The use of spacers will tighten up the wires, so that they do not flop around, and distort the pickup pattern, as well as reduce inter-electrode capacitance. This makes for a very stable loop.
M). Notes:
Loop shapes: Triangle (Wedge), Square (Also called box, this is the most common shape) Octagon, Circular.
Note that the box loop is used because it is the simplest to build. The circular loop provides the nearest to the perfect shape electrically, but it is very difficult to fabricate a multi turn loop of this type. The octagonal loop is the practical compromise. Also note that the Octagonal is more difficult to fabricate due to it having 8 arms instead of 4, for the box loop.
What Can I use a Loop For
6). Using the Loop practical applications
The small loop is a versatile antenna, and can be used for many different applications, here are a few.
A). The loop can be used for improving the performance of a poorly designed broadcast receiver. Depending on the type of antenna that is in the receiver determines how the loop can be attached. It may be attached via a transmission line if the set has wire or screw binding posts for the Antenna, or it may be inductively coupled (transformer) for a receiver using a very small loop. In the case of the receiver with a small loop the coupling rules apply as if the receivers loop is the link turn in the Transformer loop. (Note that the link coil is not needed for the loop to work for this, as the internal loop in the receiver is receiving the signal from the main tank circuit). The distance from the receiver to the larger loop will determine the amount of coupling, and tank loading. One can vary the pick up pattern by varying the angle of the receivers internal antenna to the external loop. The antennas provide maximum transfer of signal, and closest to a figure 8 pattern. when the pick up angle of the antennas is opposite parallel (90 degrees) (Beams of the antennas aimed at each other) Minimum pickup occurs at 180 degrees. The pattern can be spoiled to a cardioid (null in only one direction) by varying the angle. Please note that the pattern will probably be somewhat spoiled from a figure 8 at the maximum signal 90 degree points. Please note that there are 2 commercially available products designed to inductively couple to the receiver, and improve its signal. These are the "Select A Tenna", and the "Q Stick" by Radio Plus (Gerry Thomas). However a 2ft or larger loop provides for much better performance provided one properly adjusts the coupling. A Large loop (4 ft) can cause a poorly designed receiver to overload. Loosening the coupling will allow for the overload to be eliminated. One must also be sure for proper operation that the loop is tuned to the same frequency that the loop is tuned to, or unwanted overload effects will likely be noted. All tuned circuits should be "aligned" to the same frequency. Also note that high Q tuned circuits can sometimes be touchy to adjust "spot on", some practice will probably be necessary. One can be amazed at the improvement in performance when using a properly designed loop. Stations can be brought from out of nowhere on a poor set. Images at the low end of the broadcast band will be cut down significantly or completely eliminated.

As stated previously, adding a properly designed tuned amplifier further improves the performance of the system. The amplifier can be fed by feedline to a coupling link that couples to the receivers internal loop, or can be direct attached to a receiver with antenna connections.
B). A loop when properly balanced can be used to "null down" AC Line noise, TV Sweep Harmonics, or other locally generated interference. The Alt-azimuth feature helps greatly reduce, sometimes totally eliminating the noise. This feature is also quite useful for nulling of co-channel, or adjacent channel broadcast band stations. If properly balanced, nulls of over 60 dB may be attained by using the Alt-azimuth feature. Deep nulls can be difficult to find and maintain. A larger antenna allows for one to find the null more easily due to the larger pick up(field) created by the loop. Loops of 2 ft and smaller in diameter, can be quite touchy to null, and electrical balance can be quite hard to attain. Hand capacitance can also affect the null in these small loops, causing the null to move as ones hand is moved away. This effect is minimized when using a large loop, as your whole body is within the pick up pattern of the loop, and it will be less likely to distort the pattern. One needs to be 6" to 1’ away from the small loop(2ft and smaller) to avoid the hand capacity effects. It is also notable that nulling works best on local ground wave signals. Distant sky wave signals can be more difficult to null. It is difficult to get a null of greater than 30 dB on a sky wave signal at the top end of the broadcast band at night. For Sky wave, phased antennas provide for much better nulling, but are much more complex, and difficult to operate. Also note that the higher the Q of the tank coil, the sharper the null. Sometimes the null will be excessively sharp, and difficult to find, or the null will be so narrow in bandwidth that the carrier of a station will be deeply nulled, but the sidebands will be well received as slop(splash). This affect is more noticeable in small, or amplified direct coupled loops.
C). Radio Direction Finding
One can accurately direction find signals provided that the antenna is properly balanced as described above. The general concept is that the deepest null will be in the direction of the signal being checked. You cannot use the Alt-azimuth feature, you must keep the loop perpendicular 90 degrees to the ground. An accurate compass, and a marked 360 degree circle can be used to pin point the exact bearing that the signal is coming from.

Bibliography from the three articles above can be found at the bottom of this page.

Loop Antennas Another Look
The last 30 years have brought about much refinement in the design of loop antennas. Starting from the basic box loop described by Ray Moore, major developments over this time are; The NRC 4ft Alt-azimuth loop, the Space Magnet, Sanserino Loop, Palomar, Mckay Dymek, Radio West, Quantum, Lankford, Kiwa, and RSM 105, and 103. As time has progressed, so has the design of Receiving Equipment, from the R390A, HQ-180, and SX-122 and Zenith Trans-Oceanic to the Sony 2010, Drake SW-8, Drake R8-B, and the AOR7030 Plus. Antenna needs have changed, with today’s broadband front ends, and synthesizer phase noise a concern, a high performance loop, or other means of pre-selection is more important than ever.

We will show a slightly different twist on the same basic loop antennas of the past, with a couple of refinements, as well as construction details of our antennas.

To explain our antennas we want to start with the design criteria necessary to improve the modern communications receiver, as well as consumer grade radios such as, the Super Radio III, the Radio Shack Optimus, and most other portable short wave/broadcast receivers.

Important loop criteria have been explained before in the pages of DX News, and the NRC Antenna Manuals, however, a review is in order. It is our opinion that there are 4 basic parameters that loop performance should be based upon; 1). The loops signal to noise ratio. 2). The electrical Balance. 3). The selectivity or "Q" of the loop. 4). The mechanical rigidity/integrity of the coil assembly, and Alt-azimuth mechanism.

Signal to Noise Ratio

Most efforts during the last 30 years have dealt with making loops smaller, to allow them to be used by the DXer who has limited space. S/N ratio has suffered as a result. The use of direct-coupled balanced FET amplifiers, and smaller, and smaller loop coils means that the bulk of the work in the system is being done by the amplifier. If you capture a very tiny signal, and add some amplifier noise to it, you have degraded what signal that you have to the point that you may bury a signal slightly above the noise floor. A rule of thumb would be to use no more amplification than is necessary. It is better to make the coil larger to enhance the capture area, and insure that what amplification is used is as low gain, and low noise as possible. The small loops are probably OK for most uses, but when you want to extract the last decibel out of the ether, a larger loop that is properly designed will be best.

Electrical Balance

The electrical balance of the antenna insures that the current at the termination of one end of the loop tank coil is of equal magnitude and opposite polarity to that at the other termination of the loop coil. (A is equal and opposite B) When properly balanced the deepest possible null will be obtained, with the loop. Please note that balance is quite difficult to attain. Anything connected to the tank coil (or other metal brought physically near it) other than the resonating capacitor, can throw this balance (equal and opposite) off. This distorts the theoretical figure 8 pattern of the loop. If a link turn is used to couple the loop to the receiver, this link and the transmission line must be balanced, or coupled to an unbalanced line (Coax Cable) using a Balun. The link coil should be balanced, as well as the main tank coil. Using a balanced FET amplifier on the tank coil will throw off the balance if care is not to insure that the FET’s are not exactly matched in their gain and transconductance. Not to mention that an amplifier not properly balanced, and running at excessive gain will be prone to create intermod products which degrade further the performance of the system. If a loop antenna seems to have a problem with hand capacitance it is a pretty good bet that it is not properly balanced. Refer to Nelson’s article for detailed hints on how to attain balance.

Selectivity

The "Q" or quality factor of the tank coil will determine its selectivity at resonance (the tuned frequency). If the "Q" of the tank coil is loaded

(reduced by the effect of a load on the coil), the "Q" will decrease, and the selectivity of the loop will decrease, or broaden. In the late 60’s Nelson devised the balanced FET amplifier as a way to minimize the loading of the tank coil. This allowed for selectivity that was so sharp that a loading potentiometer was added across the tank coil to reduce the "Q" so that the loop could be more easily tuned. Prior to this, loops were of the transformer variety, with the signal being coupled to the receiver via a link turn, wound amongst, but not attached to the windings of the main tank coil. This process did not take into full account transformer theory, as the loop is now a transformer due to the link coupling. The main drawback of the early designs is that they did not use the coefficient of coupling when designing the loops. Moving the winding away, somewhat from the main winding allows for less loading. Maximum energy transfer from the tank to the link would occur at "critical coupling". The load impedance also affects the loading, and should be matched to the impedance of the link turn, as well. As stated before the link should be balanced. A balun, and matching transformer should be used with a modern receiver with a 50 ohm coaxial input. The distance that the link turn is from the primary tank coil greatly affects the performance of the loop. The "Q" can be greatly improved, as well as the S/N ratio if the link turn is placed at the critical coupling point from the main primary tank winding. This distance from the main winding can be approximately determined prior to winding the link turn using a pocket radio. Tune the pocket radio into a station that is within the tuning range of the loop. Start out with the pocket radio placed facing the plane of the loop (see fig 2) right against the loop winding, rotate the loop capacitor for a peak (maximum signal) on the pocket radio. Now move the pocket radio ½" from the winding and re-peak the loop. Observe how sharply that the loop tunes. Move the pocket radio away from the loop in ½" increments. Observe how sharply the loop peaks on the pocket radio, as well as the signal strength at each point. The loop should peak more sharply, and increase its gain as the radio is moved away. The point of critical coupling is attained when the signal is at maximum, the sharpness may still increase somewhat, but the gain will fall off more rapidly as the radio is moved away. Note the critical coupling point, and wind the link coil this distance from the main winding. This process can also be used when passively coupling the loop to a radio using a ferrite antenna, or when using a device such as a Select-A-Tenna, or a shotgun loop , or "Q" stick with a radio with a built in loop.

Mechanical Integrity

Another consideration when building a loop is the mechanical design. This is often overlooked, and can affect the loop balance if the mechanics are sloppy. There are two different types of loop coil designs, The solenoid or box wound, and the spiral or pancake wound. Each type has several advantages, design trade offs, and dis-advantages. The box loop has a higher gain for the same diameter, but is more difficult to balance. With this type of loop there is a trade off between the inter-electrode capacitance and the length to diameter ratio. Spreaders can be used to cut down on the inter-electrode capacitance, and to maintain coil rigidity. Note that the better the length to diameter ratio of the tank coil, the nulling ability is enhanced and balancing is easier. The spiral loop has

the advantage of almost perfect length to diameter ratio, as well as being easier to balance. The main drawback of the spiral is its lower gain than the box loop. Also, if an amplifier is used, it is much more difficult to tap the tank coil at its center. An amplifier can be used more practically with the spiral by attaching it following the balun and matching transformer. This way the amplifier is isolated from the loop, and the undesirable unbalancing effects can be avoided. Note that an amplifier should be used only when necessary, and should be as low in gain as to improve signal strength on very weak signals, where not using it would yield them unreadable. It is important that the loop antenna be well constructed mechanically to insure that the wires do not flop around, to distort the balance, as well as to prohibit the need for re-winding. We have switched from wood to PVC in our designs, with a minimum of metallic objects near the tank, and link coils. Note that metallic objects within the near pick up field of the loop will induce a voltage into the coil unevenly and throw it out of balance.
Links to further loop information.
bullet Kiwa Has the Pocket Loop, mods for your receiver and filter modules.
bullet Select-A-Tenna Has some low cost loop antennas you can buy.
bullet Terk Home of the Terk loop and other antennas.
bullet Wellbrook Has a line of LW, MW, SW loops for the great outdoors.
bullet AOR Their site for the LA-350
bullet Radio Plus+ Home of the Quantum Loop.
bullet Belar LP-1 and LP-1A AM shielded loop antenna
bullet Torus Tuner Loop Antenna is available in LW, MW, and SW.
bullet Twin Ferrite AM Antenna Is available at C. C. Crane
bullet Long Distance MW Listening Great info on the Radio Nederland's site.
bullet DIY MW Loop On the Radio Nederland's site.
bullet Ramsey Signal Magnet Noise Reduction Kit
bullet Mark Connellys page of phasing units and amplifiers for radio
bullet Loop Antennas On the HCDX site
bullet AM Box loop antennas by Bruce Carter.
bullet AMANDX Is another construction site.
bullet Hula Hoop Loop Antenna has plans using a hula loop.
bullet LF receiving loop A large homemade loop.
bullet Mag-Loop Antenna Designed for SW it can also transmit.
bullet Receiving Loop Aerial for 1.8 MHz Is a shield loop out of coax.
bullet Joe Carr's Tech Notes Has articles on antennas.
bullet VLF Loop A loop for listening to solar activity.
bullet PVC 4-7 Plans for a NDB loop.
bullet Loop Theory Is an excellent article on loop antenna theory.
bullet AM Loop Calculator Figure out what your loops should tune.
bullet NRC Has many book on loop antennas.
bullet Vans Think Tank Contains a good list of antenna links.
bullet NRSC AM bandwidth measurements with the loop antenna.
bullet The Electronics Hobby Page Another site with a excellent listing of antenna and DXing links.
bullet AM Loop Antennas Plans, links and theory.
bullet AM Tuner A tuner that you can build from tubes.
bullet The Electronic Hobby Page Has an extensive list of loop and radio

information.
bullet Small Transmitting Loop for the HF band also has links to other loop sites.
bullet Dave's Loop Antenna He made this loop.
bullet LF Loop Plans for a 10 foot loop plus other LF information.
bullet Loop Antenna A circular antenna that VK2ZAY built.
bullet Low Noise Coax Shielded Loop for 160 to 10 Meters.
bullet N5ESE's Plans for a shielded loop receiving antenna.
bullet Loop Amplifier Build this amp to boost your loop.
bullet Loop Group Join this group on loops antenna on Yahoo.
bullet The Toroid King Has toroid to build your baluns they also have other parts.
bullet Amidon Another source for toroids.
bullet AM Broadcast Band Antenna Plans for a Active whip Antenna.
bullet AM Radio Loop Antenna A kit that you build from MTM Scientific.
bullet Active VLF Loop Amp Loop amp with negative resistance.
bullet Balanced Loop Preamp Give that loop a boost.
bullet Receiving Loop Theory A good article on sensitivity of Multi Turn receiving Loops.
bullet A Remotely Tuned Loop for LW & MW
bullet 6 Meter Halo Antenna Design at dxzone

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3). NRC Antenna Reference Manual Vol 1 1985 Edition "HQ tests the Space Magnet" P40
4). ARRL Handbook 1988 Edition P39-3
5). QST Magazine July 1977 "Beat the Noise with a Scoop Loop" Doug DeMaw
6). NRC Antenna Reference Manual Vol 1 Dec 1995, "The Hawk Loop"
7) NRC Antenna Reference Manual Vol 2 Dec 1995 "The Harley Loop" P 11
8). NRC Antenna Reference Manual Vol 1 Dec 1995 P21 " The NRC 2 Foot Loop"
Suggested Reading:
1).National Radio Club Antenna Reference Manuals Vol 1 and 2 1995. Available from the National Radio Club P.O Box 164 Mannsville, NY 13661-0164
2). National Radio Club Loop Antennas Design and theory 1995 Available from the National Radio Club P. O. Box 164 Mannesville, NY 13661-0164
3). ARRL Antenna Book 1994 American Radio Relay League, 225 Main St., Newington, CT 06111-1494
4). Joe Carr’s Receiving Antenna Handbook 1993, High Text Publications P.O. Box 1489 Solana Beach, CA 92075

Hi

Thanx
73 de Jordan ve7jjd

On Thu, May 18, 2017 at 12:06 PM, gnuarm.2007@... [loopantennas] <
loopantennas@yahoogroups.com> wrote:

>
>
> Details of building a loop antenna for reception will vary according to
> your specific needs. The one comment I would make is that a loop antenna
> will require a rotator. Unless you lay the loop horizontal it is
> directional much like a dipole.
>
> You might consider using coax. That is already waterproof (or can be) and
> can be used to make a shielded loop of any size and as many turns as you
> would like. RG-6 has an 18 gauge center conductor giving a low resistance
> across a range of frequencies. Pick your total cable length for the loop
> and buy two coax cable, each half that length. Connect just the center
> conductor in the middle (not the shield) and the other ends become your
> feed point. There are many ways to couple to this loop, and easy one is to
> use a ferrite core.
>
> Rick C.
>
>

11882. Re: durable designs to carry around in motorhome

Yahoo group: loopantennas (2013 — 2017)
Date: 2017-05-22 14:22:09 UTC
From: rbrucecarter@...
Topic: 11876 Message: 11882

I have done some portable designs:

- using some slats from a discarded blind set to make a three foot loop
- making a folding loop from some discarded shelves
- a five foot loop using umbrella-like structure.

All collapse into a really compact structure for travel, set up easily. I would say the folding loops is the most cumbersome, the one from blinds is really delicate but fair stable when deployed, the umbrella one really intensive on assembly.

http://earmark.net/gesr/loop/foldloop.htm http://earmark.net/gesr/loop/foldloop.htm

http://earmark.net/gesr/loop/ribbonloop.htm http://earmark.net/gesr/loop/ribbonloop.htm

http://earmark.net/gesr/loop/umbrellaloop.htm
http://earmark.net/gesr/loop/umbrellaloop.htm